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Sorgo Department.

The Champaign Sugar-works reports 151,000 pounds of raw sugar as the crop of 1883; the Sterling, Kan., works, owned here, upward of 200,000. This, under all the adverse circumstances, may be considered a good showing, and is unquestionably the prelude to a storm of sugar music some years ahead.

In localities where amber cane has been grown for sugar this year it should not be forgotten that its seed, ground and separated from the husk, makes an admirable substitute for buckwheat flour. The farmer who grows amber sugar cane may thus supply himself with food and with sweet to make it more palatable.

Regarding the sorghum sugar industry in Kansas, M. Day, Jr., writes the *Buffalo Express* that two of the refineries have reported unqualified success, this season. One is managed by M. E. Scoville, late of the Illinois University, and the other by Professor Swenson, late agricultural chemist in the State University at Madison, Wis. This latter refinery is owned in New York and cost \$100,000. The two companies cultivated 3,000 acres of cane, and the yield will be from 700 to 800 pounds of sugar per acre and from 60 to 75 gallons of sirup. Both sugar and sirup are entirely free from the sorghum flavor.

From all parts of the country we have encouraging evidences of a desire to attend the coming convention of the Mississippi Valley Cane Growers' Association to be held in St. Louis January 16-18 next. Cane growers from all the country around are anxious to attend the meeting to listen to the addresses and the discussions resulting therefrom. They know more than they did four years ago, and the more they know the more they want to learn, realizing as they do that in the cultivation and working up of Northern sugar cane, "knowledge is power."

We expect to have present the best writers and experimenters in the United States, to afford farmers an opportunity of gaining information that shall aid them in the years to come, enable them to make a better article and command a higher price for the product. It will be distinctly understood that all interested in cane culture will be welcome; they may become members of the Association on payment of the annual subscription fee of one dollar, and enjoy all the benefits and privileges of membership during the three days' meeting, and as well aid in the conduct and management of the Association.

By all means should the cane growers of this entire neighborhood turn out en masse if they would learn the best methods of the best men in the country.

EDITOR RURAL WORLD: About four weeks ago I sent you two samples of sirup by express, charges prepaid, and have not heard from them. Will you please be kind enough to state whether you received them or not, and greatly oblige. Yours Truly, J. F. PORTER.

Red Wing, Minn., Dec. 6.

They have been received and tasted by a large number of persons, and pronounced of most excellent quality.

EDITOR RURAL WORLD: I had in one and two-thirds acres of orange cane, which made 208 gallons of sirup. Total cost of raising and delivery at the mill, \$27. Cost of making sirup at 20 cents, \$41.60, total, \$68.60. Sirup sold at 50 cents, \$104; fifty bushels of seed sold at 40 cents, \$20, leaves, one ton, \$8.00, total receipts, \$132, showing a profit per acre of \$38.04. Hope to be in attendance at the coming convention in St. Louis in January. B. H. B.

Oxford, Ohio.

From Dakota.

EDITOR RURAL WORLD: I feel so much better, after seeing our Sorgo Department on first page of the *RURAL WORLD*, that I concluded I would write one more letter for it anyhow, if I am located away up north in Dakota. I think more than likely, that our Illinois man, whose mocking bird hatched after only twenty-four hours setting, would like to hear from this part of the world again. Mr. Editor, we are not at all, as yet, discouraged about sorghum culture and manufacturing, even in this latitude; although I see by statistical reports that the sorghum industry is falling off in all of the Northern States except Indiana. And perhaps that is the main reason why she has got ahead of us with her annual convention, getting it in during the holidays, when I think ours ought to have been, as it is the oldest and more general in its features. There was quite a good deal of cane planted in this country this year, for such a new country as this, but the early frost on Sept. 8th cut business short here, as there was but little of it matured at that time. I made two hundred gallons as it was. A pretty good article, good enough to sell readily at 80c per gallon, by the barrel. I have the honor (if there is any in it), of erecting the first sorghum factory in Hand county. Our soil is of such a nature, being a black loam with considerable sand, and a marl subsoil, that it forces a quick and strong growth, and rich in sweetness, so that with an ordinary season we can make a good showing with sorghum. Mind that Dakota was not alone to have early frost; Minnesota, Wisconsin, Michigan and Northern Iowa suffered as bad from frost on same date, and in some localities more. And the reason why I think we are not discouraged about raising cane in Dakota, is because there is more inquiry for seed to plant next spring than I ever heard before this time of the year. And let me say here, that those having good seed, will do a good thing to advertise the same in the *RURAL WORLD*, that we may all know where to get it to plant early next spring.

I am going to try and send in a few more names for the *RURAL WORLD*, for it certainly is one of the best papers printed for the farmer. Now, readers, let us do more for the sorgo department of our paper, for we are again placed at the front, let us keep worthy of the place. Do not become discouraged because of early frosts, bad seed, and a little poor sirup, but see to it, get good pure early varieties of seed, plant early, on good suitable land, don't wait until all the other crops are planted and maybe half cultivated before you think of planting the cane patch, go at it as though you meant business, and I will insure it to pay you as well, if not better than anything else you can raise on the same amount of land and labor.

We are having the finest weather I ever saw this time of year; the roads are almost as smooth as a floor, and everybody in the best of spirits in our new homes. No snow yet. B. K. P. Miller, Hand Co., Dakota, Dec. 1, 1883.

Soils For Cane.

BY E. W. DEMING OF LAFAYETTE, IND., SUGAR REFINERY.

The complete success of the Northern cane industry as an exclusive business depends very much upon the selection of the soil, much more perhaps than any one thing—unless it be the absence of early frosts.

This subject has been well considered and much has been written upon it. We have reports from nearly everywhere of most wonderful yields of cane, and its products, from nearly all soils until one almost believes that one soil is as good as another. All soils are not alike affected by seasons; a good soil for this season may do poorly the next and vice versa.

It is generally supposed that heat is necessary to the full development of its saccharine strength. We would therefore hardly expect the best results from clay soils but rather from a light sandy soil.

A clay soil with gravel or sand subsoil or well underlaid so that surface water readily passes off without waiting the slow process of evaporation by solar heat is in my opinion the very best soil for cane. Clay is slow to feel the Springs warmth, seed germinate slowly in it, should be fall plowed, and if foul may be easier to get once clear, but after this all is plain sailing, and with two cultivations will make as good a crop as a sandy soil with three.

During the months of July and August, if hot and dry, when cane on sandy soil is hastening to maturity with an undersized stalk supporting a spare tuft of seed, the cane on clay soil is making its main growth, and if soil is good corn land, one may almost wish for cool nights or a slight frost to bring the cane to a sense of its duty, viz: stop growing and ripen up. On clay the yield is heavier than from sand, the juice will work better and the product if sirup will be a lighter color though the juice will not show as high a per cent of true sugar as from the sandy soil. Nevertheless, the works at Campaign and Hoopes-ton, Ill., both located on heavy clay, are doing good work.

A sandy soil should only be plowed in the Spring; if weather favorable, seed will germinate in a few days, and, on account of the soil's warmth, weeds and grass grow very rapidly, requiring almost one cultivation each week until cane is jointed, and unless a good stand of cane to shade the ground, and land not foul, you may also have a good crop of grass.

On sandy soils cane ripens early, and, if a dry season, at the expense of the stalk; this cane will show the highest per cent of true sugar and the juice will require more care at the clarifiers than juice from cane grown on clay soils.

Along rivers are generally two kinds of bottom lands, upper and lower. If the upper one is of clay and sand, in nearly every case, as they often are, and water is to be found in their subsoil, they are most desirable soils for cane, especially if above the reach of early frosts.

The first or lower bottom a black sandy loam gives the largest crops of cane with equally large yields of sirup, but of an inferior quality; especially is this the case if juice is furnished by a mill giving a large percentage of juice.

Owing to excess of gums and other impurities in this juice its treatment is very unsatisfactory. It has a low per cent of true sugar, and a high per cent of glucose as compared with upland cane, making it difficult and often impossible to evaporate to the usual density without great danger of caramelizing the glucose.

This soil frequently contains vegetable matter not well decomposed, that gives

the sirup a salty taste—due to salts of ammonia taken from the soil.

Any soil treated to an excess of strong manure, not well decomposed, has the same effect on sirup.

There are many other soils that vary from the foregoing by having a slight excess of sand or clay as the case may be. Of all of these it is impossible to speak.

In conclusion, I would say that either clay or sandy soils are good for sirup, while the latter is best for sugar.

Some experts claim they can work cane grown on bottom lands for either sirup or sugar with equally good results as from the upland. This I believe is opposed to the experience of practical workers.

As bottom lands often vary somewhat an actual test will best determine their capability.

West Point, Ind., Dec. 5th, 1883.

Not a Sorghum Enthusiast.

"Prof. W. L. Chamberlain, Secretary of the Ohio state board of agriculture, expresses very grave doubts whether sorghum will ever pay to raise in that state, and questions whether the manufacture of sugar and sirup will ever become a paying business there. The circumstance that silk worms pay in certain parts of the world does not go to show that they can be made profitable in Ohio or any of the Northern states. He suggests that sugar raising may be safely left to countries enjoying a tropical climate, while less favored regions pay attention to producing grain, apples, horses, animals intended for supplying meat, butter and cheese. These are suggestions which the department of agriculture at Washington would do well to consider. It has been engaged for several years in working up a 'sorghum boom,' but it is very doubtful if the country has been benefited by it. Great expense has been incurred in making analyses of cane juice and showing the amount of sugar that it is possible to make from it. The report of every success in growing cane and of making sirup has been published and distributed throughout the country. In regard to the great number of failures it has preserved strict silence. For all the department has published the agricultural public would never know that there had been any failures. This has been a very unfair way to treat the subject. The public should have information on both sides, and not the favorable reports alone. The department, to be fair in the matter, should publish the list of failures to produce cane and to make the manufacture of sugar and sirup profitable."

Of course what Mr. Chamberlain doesn't know about the Northern sugar cane isn't worth knowing. He has probably practiced on his own farm for many years and in the laboratory. Is possibly an expert whose evidence would be worth something if cross examined. If the *RURAL WORLD* knows anything of the estimate in which the agricultural press of the country is in the habit of speaking of the policy of the U. S. Department of Agriculture respecting this industry, it is decidedly the reverse of what this Mr. Chamberlain has to say. If we have noted with any degree of special care what department has said of late years in regard to the cultivation of the sorghum cane we are able to say now, that not only has the half not been told but that scores of farmers have testified through our own columns to a fair success never dreamed of in any report issued since Dr. Loring was made Commissioner. We have no idea of the advantages possessed by Mr. Chamberlain for the acquisition of correct information, or the amount of credibility to be attached to any opinion expressed by him; but on general principles are disposed to think he would not make a very good case if confronted by two or three farmers of his own state taking the other side of the question.

Sorghum in Tennessee.

We had a pleasant and profitable visit last Monday from A. C. Sealy, one of our most reliable farmers, who lives about three and a half miles from Columbia, and who has been devoting considerable attention to sorghum for some years. He brought us a very pretty sample of sugar made by him, and gave us an account of his experience. During the past season he had in about five acres of cane of different varieties, but prefers the "Gray Top." Of this he had in about 1.1-acre, which yielded him 21-2 bbls. of sirup, or about 118 gallons. This was allowed to stand about three days and then was placed in a "centrifugal mill," and the sugar separated from the sirup, and what was 21-2 bbls. of sirup yielded two barrels of sugar and two of sirup, the latter selling for about as much after as before the sugar was separated from it. The two are valued about as follows:

475 lbs. sugar @ 10c \$47.50
35 gals. sirup @ 30c 10.50
Total \$58.00

Besides this, Mr. Sealy's crop yielded him 40 bushels of seed, which, from drought and scarcity of seed was sold at \$14 per bushel.

This is a remarkable yield and rather larger than usual with him, but he always gets a large yield from the crop. He is a faithful worker, and more careful than the majority of farmers would be in grinding, evaporating and separating, though his mill is an old one

and has been in use 16 years and his power is an old condemned government mill, and he lacks the means to operate on a larger scale.

He says that the above crop on the 1-4 acres was raised on new ground and planted thick, and his experience as to its effect on the land is that it does not injure the soil more than other ordinary good crops, and he has run the same land in it 5 or 6 years and then sowed wheat or rye. It requires no more labor than corn. His time for cutting is before the grain hardens and when it is in the dough state, and even when it has some milk in it.—*Columbia, Tenn., Herald.*

Diffusion.

The Department chemist says the experiments at Washington in sorghum-sugar manufacture have now closed. The best results have at last been reached by what is known as a system of diffusion. This process comprises the chipping of the seeds into fine particles by a machine acting like a lead-pencil sharpener, but on an immense scale. When chipped the sorghum is placed in a battery of iron or copper cells, where warm water is turned on and allowed to percolate through the mass until it reaches the last cell. Eighty per cent of saccharine matter has been extracted in this way out of a total of 88. The process is not a new one. It has been used extensively for the past 25 years in countries where beet sugar is made, and has gradually driven all other systems out. Commissioner Loring will not ask for any further appropriations for department experiments. In his report he will recommend an appropriation of \$1000 for each State, to be expended by the State Agricultural Association in the purchase or leasing of 10 acres of land for the experimental planting of sorghum; these 10 acres to be composed of sections of two acres in different parts of the State, so that climate and topographic influences can be studied and reported. Of the popularity of this scheme the commissioner has no doubt, as it will be in his opinion, a miniature river and harbor bill, where all the state delegations are equally interested. The total production of sorghum at private manufacturing during the present year will reach, in round numbers, 1,250,000 pounds. Half of this has been made at Rio Grande, New Jersey, and the rest in Kansas and Illinois. The cost per pound at these places, is not, it is believed, so great as at the government institution.—*Boston Advertiser.*

The genial satire of the last sentence is refreshing. Query: If it takes the government ten years to build a custom house at a cost of \$7,000,000, how long would it take a farmer to build a barn? If the successful cultivation of northern cane and the placing of its product on the market at paying prices had depended on the United States Government, sugar therefrom would not for fifty years hence have been placed on the market at eight cents per pound at a profit. It has taken the farmer to do this, without aid or assistance from Washington or any of the employees of the Department of Agriculture.

Northern Sugar Cane on the Western Reserve.

The sorghum industry does not seem to make any substantial gain upon the Western Reserve. In fact it may be said to be on the decline, for several of the local attempts to make sorghum sirup have gone out of existence, and I think only two sorghum works, conducted upon scientific principles, exist in this section, the Maltby works, and Talcott's refinery at Jefferson. There are many reasons to explain this, the principal one being that no great capitalists are interested in the undertaking, and another is that the eastern part of the Reserve is one of the finest maple sirup and sugar sections in the country, and exports maple products by the \$100,000 worth every spring, which naturally places sorghum at a disadvantage. The past attempts to produce sorghum sirup on a small scale, such as was produced at first, drew only a small crowd of admirers. The success depicted by B. F. J. would hardly be possible in a maple country. The soil is adapted to Ohio, and doubt for the maple sweets, good success would attend its production upon a large scale. Whenever it is planted here to stay, it must be done much in the same way as cheese factories are conducted. The factory must be first erected, and then the farmer induced to grow cane and sell it, as he does others of the unmanufactured products of his farm.

One of the points of profit to be settled, and one in which the consumers could do a great deal to hasten such a consummation, would be for them to refuse to buy the glucose sirup, and demand pure goods, but so long as glucose can be made and sold at a less price, and fill the demands over and above the production of southern and maple sirups, the sorghum industry will have a hard time to push the corn sirups out, crowd itself in, and be sustained by public taste. The simple solution of the whole matter is, that sorghum refineries cannot be made to pay in cities, but must be built in the country, and maintained by ample capital until the farmers can be made to look upon them as reliable and permanent manufacturers, to be depended upon in turning a farm crop into money. The product must be so well made that the consumer may come to regard it as a standard sweetener. Meanwhile the farmers of the Reserve who own maple camps are fixing up in a

way never before heard of, providing evaporators, galvanized iron tankage, tin buckets, and well constructed sugar-houses. What is yet more wonderful, sugaring now commences in the fall, wood, repairs, &c., being now attended to instead of during the first "run;" showing that securing better products, and all that is or can be made from them, is the rule of the maple sugar makers. The result is that the average quality has been greatly advanced, and the market demand has been widely extended. This is good news for those who like maple flavor, but it need not of necessity refuse place to well made, and unadulterated sorghum sirups and sugars.

There are many things said and suggested in the foregoing from a correspondent to the *Country Gentleman*, worthy of thought, and others, again, that are known to be erroneous by those who have skill and experience in the cultivation of Northern sugar cane and the manufacture of its products. The "I think," and "It may be said," in the first paragraph, indicates that the writer knows nothing of what he is writing about; hence "the many reasons to explain this" are naturally understood to be fallacious. The idea of the maple sirup and sugar sections of the Western Reserve exporting sugar and, therefore, placing sorghum at a disadvantage is one of the most absurd propositions that has yet appeared in print. One would suppose from the pretensions of the writer and his manner of putting things, that, because maple sugar and sirup was exported (?) from the Western Reserve by the \$100,000 worth, that, therefore the people of that favored section imported no sugar or sirup; and that being the case there was no need of the culture of the Northern sugar cane. Seldom have we met with so frivolous an argument in an intelligent newspaper deprecating the culture of sorghum.

Kansas Sorghum Sugar.

The editor of the *Grocer* is in receipt of a sample of sugar from the sorghum sugar works at Sterling, Kansas, which are under the superintendence of Prof. Scoville, who, in connection with his associate, Prof. Weber, organized the Champaign-Sugar Company, which made such a success last year—the first of its operation, and is doing still better this year. Part of the stock of the Sterling Company is owned by stockholders in the Champaign Company, though it is under independent management. The sample before us is a beautiful, clean, fine grained sugar, with a sharp, hard crystal, and with slight tinge of yellow in color. It is almost a pure white, entirely free from any flavor that would distinguish it from the best grade of Louisiana centrifugal sugar; would grade as an off A. It is being made, as is also that at Champaign, under what is known as the Weber and Scoville process—a process devised by those gentlemen as the result of their scientific investigations into the qualities of the juices of the sorghum cane, and the best methods of converting it into sugar.

Agricultural.

Ice-Houses.

There are, in the construction of ice-houses, a few conditions which must be imperatively complied with, and without which success is impossible, no matter how expensive the structure may be. These, and the most important points to be observed in building ice-houses, are well described by a writer in the *Century*. He says:

If the soil on which the house is to stand is sandy, and has a gentle slope, there is nothing to do but to dig a cellar about two feet deep and fill it with stones. Cover the upper layers with smaller stones and sand. This will make the floor on which the ice is to rest. The water will escape easily to the rest, the sand and stones, and there will be no chance for currents of air to flow upward into the house. The tendency of the air in a badly made ice-house is always to flow through it. Therefore, while there must be drainage, there must be no inlets for air. If the soil is wet and not easily drained, the surface must be covered two feet thick with stones, and the house placed on top of this. If this is done, the sides of the stone-work must be made tight with mortar, to prevent the entrance of air. If provisions must be made for carrying off the water, the pipe may be trapped to prevent the air from entering the pipe, and thus getting into the house.

A well-drained foundation having been prepared, a wooden sill must be laid, on which the walls are to rest. On this sill will rest the uprights. These may be simply planks eight inches wide and two inches thick. They may be placed at intervals on the sill, and held in place by a string-piece on top. On the outside of the uprights may be nailed boards with battens of clapboards. On the inside they are simply boarded up with cheap stuff. The whole aim is to make a hollow wall. The space between the outside and inside boarding must be filled solid with tan-bark, sawdust, or rough chaff of any kind. Upon the walls patten or shingled. It must be rain-tight, and must not be air-tight. There should be an opening at the ends or a

hood or ventilator, to permit a free circulation of air through the upper part of the house. The door should have double walls filled with sawdust.

The ice should be cut with a saw into regular blocks, so that they will pack snugly. Of course, the thicker the ice the better; but carefully packed ice will keep if only three inches thick, provided it is properly packed in freezing weather.

When the filling begins, cover the entire floor with a layer of sawdust, tan-bark, chaff, or cut straw, six inches or a foot deep. A space a foot wide should be left between the walls of the house and the pile of ice. Where the ice is to be piled lay down a floor of straight-edged boards to cut off the air and keep the ice layers level. Cover this floor with a thick layer of sawdust, and as the ice is laid down fill in the space around the pile with sawdust and pack closely. This filling is to be added as the ice pile is built up. Over the top layer of ice put a liberal coating of sawdust, or whatever material has been used for the heat-excluding blanket.

Report of the State Board of Agriculture of Missouri.

The annual report of the State Board of Agriculture of Missouri, for 1882, is just out. Nearly a year after it should have been published and hastily gotten up. No wonder Missouri is so backward. One of the best States in the West but much behind her younger sisters in the matter of progress. After the deliberation of the Board of Agriculture for nearly a year we had a right to expect something comprehensive and complete. But what have we got? a report in name and that is all. What does it say about the crops of the State? The wheat yield, the corn yield, the number of live stock in her borders? Not a word. What progress in the matter of alfalfa did agricultural Missouri make in 1882? On this subject the report is as silent as the tomb. How much land is there in the State under cultivation, and how much uncultivated, you will never learn through the report of the State Board of Agriculture for 1882. Nor will you find anything about the hay or the potato crop, nor anything else that will tend to advertise the State and set forth her capabilities for the progress of our agriculture and its relative standing with other States. No, but you will find page after page of experimental tables, giving the result of experiments and reductions by the State Agricultural College. These are well enough in their way and plenty worthy to be published in bulletins by the College, but it is very poor material with which to make up an agricultural report of a State. There are also a number of contributions upon the different agricultural subjects, such as you might expect to find in the weekly agricultural press. And in their way written very well, but hardly the thing one would make up the body of the annual report of the State Board of Agriculture of one of the best agricultural States in the Union. We had far better have had no report at all than to have such a one as has been sent forth. Kansas in her poorest days never dared issue anything like it, and as to comparing it with similar reports from Illinois and Iowa, bordering States, and much like Missouri in soil and products, we blush to think of it.

The above from the *Kansas City Live Stock Record*, fairly expresses the sentiments of the majority of the farmers of Missouri who get the reports from other States. The questions propounded may be readily answered by saying that the Secretary of the Missouri State Board is overworked and underpaid; that the legislature makes no provision for the gathering of the information called for, hence the Secretary has no means at his disposal with which to pay for it if he could get it, and no time from his multifarious duties if he had the money. Kansas, Iowa and Illinois all publish such statistics, and Missouri ought to have done the same years ago, and to-day in that regard is one of the least in the Union.

A Good Farmer.

D. Cleveland, Madison, Me., writes to the *Mirror*: According to my idea, a good farmer must combine the judgment of many different vocations; he must be a good financier, on a small scale to be sure, but still a good one; also a good manager of labor; must combine the judgment of the grazier, the butcher, the gardener, and the merchant; he must also have that judgment about the conditions of the land and crops for which there is no written rule, and which careful observation only gives; and in addition to all this, he must have that quality for which there is no name, but which generally adapts means to ends and accomplishes things, which knows when to finish one thing at a time, which is generally best, and when to leave that thing and do something which needs doing more—the faculty which keeps his whole business together. This judgment is the farmer's first and greatest need; it is the high court which must pass upon all that is brought before it. The only man whose success is hopeless, and who will never acquire it, is he who thinks he knows it all in the beginning.

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Horticultural.

Judge Samuel Miller, Bluffton, Mo. will assist in conducting the Horticultural Department. Any inquiries addressed to him will be promptly answered through the RURAL WORLD.

Fallen Leaves From a Tree Agent's Life.
BY A TREE MISSIONARY.—NO. 5.

While standing in front of the Post Office in Denver, two wagon loads of evergreen trees just from the mountains drove up.

These Rocky Mountain spruce *abies* Mengeli *Duglasi* and *Englemanni* are considered the most beautiful and hardy of all the spruce family. The *a-Mengeli*, called by the mountain people the "blue," or "silver spruce," on account of its form and light silvery color, is highly prized as a lawn tree.

When these trees are carefully taken with the soil left intact to the roots, secured by binding a sack or canvas around them to prevent the dirt from separating from the roots, the larger sizes of such trees can be safely transplanted. But when once the soil becomes separated from the roots of large evergreens taken from our mountain forest, fatal results will follow.

We were acquainted with the owner of one of the teams, having seen him on the streets with his evergreens for several seasons, and knew him to be careful in selecting and handling his trees, and a large per cent. of them grew.

The attention of the cashier of one of the banks, accompanied by his neighbor, a prominent merchant, while going to their places of business, was at once attracted to the beautiful show those two loads of trees made standing erect in the wagons, balanced by the weight of earth tied to their roots.

"What is the price of your evergreens?" they both asked at once.

"From \$1 to \$3, according to size," my old friend Payne replied.

"Do you insure them to live?"

"No, sir, I do not. I have spared no pains in selecting them from the openings where the best rooted specimens are found, and in taking them up I was careful not to loosen the soil from the roots. If you exercise the same care I have taken they will grow; if not, they will die. I take no risks in the faults of others, or in the care of the trees after passing from my hands. I have followed the business for years—the most of the Silver Spruce you see growing in Denver was fruited by me, but not insured. When I fail to sell on these terms, I plant them on some vacant lots I have in the city—they will be called for by somebody."

"Well," replied the banker, "my friend and I wrote them a check a-plenty if you would insure them to live, but will buy of no man who has no faith enough in his trees to insure them to grow."

Passing on to the other wagon, the same question was repeated, "How do you sell evergreens?"

"From \$1 to \$3, according to size."

"Do you insure them to live?"

"Yes, sir; every one of them. Will give you a written guarantee to replace all that fail to grow."

"That is business. We will take the entire lot. Take them up to No. 10—st., and call at the bank and get your money."

After the purchaser had left, we examined the trees of the fortunate salesman. The tops and general appearance of the trees were very much the same as those of old man Payne's, but upon a close examination of the roots, we found they had been roughly grubbed up and loose dirt tied around the roots.

The man said he had been in Colorado but a few weeks. His team and wagon not being strong enough to haul in the mining district, and having no money to pay license for teaming in the city, he thought he would bring down a few loads of evergreens and thus obtain enough money to bear his expenses back again to Arkansas.

The next spring, noticing the trees were all dead, we modestly asked the banker and groceryman if they wished the services of an undertaker, to bury their dead?

"Yes, we want every one of them buried, except, or taken out of our sight, and some real living trees put in their place. You can have the whole job, and preach their funeral in the bargain. The text you can find all over town. It is, 'd—n the tree peddlers.'"

"Your text, sir, is certainly an appropriate one for the occasion but incomplete in its application. I will therefore amend it by inserting 'and their aiders and abettors. You, my friends, are men of abundant means. A thorough business education has enabled both of you to accumulate handsome properties. But, notwithstanding the luxuries you are thus surrounded with, and your superior business qualifications, you are called upon to mourn the loss of valuable time and money, thrown away upon an ignorant tree peddler. Your loss, however, is his gain."

Had that man come to you to borrow a dollar out of the bank, or buy a pound of coffee on his written guarantee to pay, you would have indignantly replied, "No sir, your guarantee is not worth the paper on which it is written. A hundred dollars of it would not buy a meal at a third-class hotel."

But when this man comes poking along the street with all his possessions on earth concentrated in the poorest team and rig you ever saw, you ask him to give a written guarantee to assume an unreasonable proposition. He at once does it, and you hand him your check for \$50. You gentlemen are guilty as aiders and abettors in a conspiracy with the Arkansas traveler to rob yourself. How well you have succeeded all who pass the streets can see. If, your fellow townsman, interested in developing and improving the country, had applied to you for the loan of \$50, you at once would have demanded collateral sufficient to protect you from any possible loss. Or had I offered to insure your life or property you would have examined thoroughly into the standing of the company I claimed to represent.

But when an honest tree man offers to deal with you on correct business principles, you choose the cheat, as the man who will serve. When you deal with tree men as you do with other classes of business men, you will find no real cause of complaint.

This offering to insure the lives of trees, after passing into the hands of Dick, Tom, and Harry is absurd.

No responsible nurserymen will do it. He will guarantee his trees to be true to label, and in good living condition when delivered, but will take no risks in the effects of the elements or in the ignorance and carelessness of a man.

Now, sir, if the loss of so much valuable time and money is punishment sufficient, go and sin no more. Next time a man offers to insure you against loss from your own faults, or the dispensations of Providence tell him you are afraid of future punishment. Set him down as a fraud. Never trust a man who will make unreasonable promises, for the sake of obtaining your money.

There is still another way of giving aid and comfort to swindling tree men. It is a sort of croquet game where the home nursery is the ball played upon.

The terrapin, without a single drop of Washington's blood coursing in his veins or scarcely a dollar in his pocket, will go into some of the best houses in the city, representing himself as the proprietor of the greatest nursery on earth, claiming their home nurseries amount to nothing, or have nothing but what he sold them, etc., etc.

It seems to me that such "cheek" and lying propensities would be bootied from every house, but such is not the case. The tramp carrying a pack of dirty remnants of dry goods, making such assertions would catch it every time; and yet he is but a true comparison to the other.

In the selling of trees and general nursery stock, the two extremes of good and evil travel over the same road, with the humbug in the lead, feeding and fattening off the horticultural ignorance of his victims.

Who is to blame, they or him?

Root Grafting.

Root grafting is the process by which small apple trees are now transformed from worthless seedlings into choice, well tested fruit. Root grafting is an economy of both time and material, as the work can be done in the leisure of winter, and more than one tree can be grown from a single root. The roots of seedling trees are taken from the ground before cold weather sets in and are stored in a cool cellar in sawdust or moss.

In the winter these roots are taken a few at a time to the room where the grafting is done, after which process they are again returned to the sawdust, where they remain until set in the nursery rows next spring. The grafting process is that known as "whip" or "tongue" grafting. A portion of the root as large as a lead pencil, or a little smaller, is cut off obliquely in much the same manner as the lower side of a steel pen may be imagined to be bevelled off with a jack-knife. This cut surface is 1 or 1-2 inches long, evenly cut and straight. A scion two or three inches long is cut in the same manner so that its cut surface exactly fits the cut surface of the root, in exactly the same manner as two pens, with the points toward each other, may be applied to each other by their lower bevelled faces. If the process proceeded no further than this it would be "spliced grafting" and the scion and stock would be tied and waxed together with their simple cut surfaces in contact. To render the union more complete, however, a split an inch deep lengthwise the scion and above the center of the bevelled surface is made, and a similar split is made in the stock or root. By this split in the bevelled surface we have divided it into two parts, the upper one of which being the smaller it is called the "tongue" or "whip." This tongue is inserted into the split in the opposite piece, either stock or scion, the two bevelled faces are brought close together, as before, and the union is firm and complete. All the work must be done with a keen-edged knife, so that the surfaces may be clearly cut. Care must be taken in putting the scion and stock together that the inner bark of the scion exactly matches on one side at least, the inner bark of the stock. The scion and stock are now lashed firmly together by waxed twine, and the grafting is done. It is not necessary to wind the twine closely, as the earth about the cut surfaces will exclude the air and afford protection. Small pieces of root can in this manner be furnished with a top of two or three scion buds, which draw up the sap and set the plant in activity in the spring. The scions are cut from thrifty trees in early winter, and stored in the cellar with the roots.—*Am. Cultivator.*

The Great Insecticide.

COL. COLMAN: A most prominent and reliable farmer of Northern Arkansas professes to have discovered a new use for turpentine. Himself and neighbors having been compelled to replant their corn every year, at length his attention was called to the fact that the grains of corn were destroyed by microscopic animalcules that consumed the germs. He finally tried turpentine, by sprinkling it among the grains and thoroughly rubbing it in. For ten years he and those who used this have never had to replant. Moreover, so powerful is the turpentine that its odor follows the stalks of corn during growth, protecting them from all kinds of insect enemies. Turpentine used freely on trees attacked by borers destroys the borers and adds vigor to the growth of the trees. Diluted in water and sprinkled or sprayed over delicate plants, vegetables, etc., etc., protects them from the like enemies, and stimulates their growth. Since learning the above I have seen it tried on apple tree borers with the effect to destroy the borers. Its odor seems to be as penetrating as musk if not so enduring. C. I.

How to Dry and Evaporate Fruit.

In answer to a letter in last number of the *Enquirer* a lady correspondent says: "In the fall of 1880 I visited a large fruit evaporator near us, and saw the lovely cream white rings as they came from the wire-cloth frame packed in huge boxes ready to ship. They looked good enough for Victoria's table. I went home, having ascertained that the cream color was the effect of bleaching in the fumes of sulphur; procured a machine that pared, cored and sliced the apple into a spiral ring at one operation, and then set the baskets filled with the rings in an ordinary packing box over the fumes of sulphur to bleach. The sulphur was placed on a few live coals in an ash-pan, one teaspoonful at a time, and the box was closed about fifteen minutes. This bleached several baskets of rings almost as white as a sheet of paper. The apples were then spread and dried in the ordinary way, and they retained their beautiful creamy color when dry. They were then packed in paper bags and put away. When cooked in the spring they were entirely free of any smell or taste of sulphur, and as fresh and pulpy as green apples. No one that has ever tried them recognized them as dried apples. Two or three small sacks were left over until this year without any further care. On opening them this spring of 1883 they were as fresh, apparently, as when first put up. The worms had not molested them. Housekeepers will appreciate this, as much fruit is lost every year from these pests. Those living in the country who are drying sweet corn, apples, berries, etc., will find their fruit much improved and made absolutely worm-proof by a few minutes' bleaching over sulphur fumes."

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Illinois State Horticultural Society.

Will hold its twenty-eighth annual meeting at Bloomington, Illinois, commencing Tuesday, December 18, 1883, and continuing three days.

A more desirable location for the holding of our meeting than this thriving and attractive city could not easily be found. It has long been known as one of the leading nursery centers of the Union.

It is also an important railroad center, lines running to it from all points of the State.

In addition to the accompanying programme, a query-box will be found on the Secretary's table, as usual.

No pains will be spared to make this meeting a most successful one.

Annual membership fee for \$1.00, which entitles each member to a bound volume of the transactions of 1883.

O. B. Galusha, President, Peoria, Illinois; Lenington Small, Secretary, Kankakee, Illinois.

RAILROAD ARRANGEMENTS.

The following named railroad companies will sell return tickets at the stations named, upon presentation of a certificate certified to by the Secretary that the holder has been in attendance at the meeting and paid full fare over same route in going to the meeting.

Chicago & Alton; Indiana, Bloomington & Western and Lake Erie & Western, from Bloomington. Chicago, Burlington & Quincy, from Peoria. Illinois Central, from Bloomington and Champaign, to points on their lines in Illinois.

The Cin., Ind., St. Louis & Chicago railroad will sell excursion tickets (two cents a mile each way) on its line. Excursion tickets on this road cannot be obtained unless the members desiring them, procure orders for them, before leaving their homes, which will be furnished on application to the Secretary.

The Missouri Pacific railway and Wabash, St. Louis & Pacific railway will also return members at one-third fare upon a certificate signed by the Secretary.

HOTEL ARRANGEMENTS.

The Ashley House will entertain members at \$1.50 to \$2.00 per day; Phoenix Hotel at \$2.00 and \$2.50; Waits' New Hotel and Waits' Hotel at \$1.25 and \$1.50 per day.

Keeping Cabbages in Winter.

Those who have a few heads of cabbage which they wish to keep over winter may be glad to know the following rule by which an experienced farmer claims to have kept them until spring without decay: Take them when thoroughly dry, and when the weather is not too warm, cut off the roots and the outer loose leaves, then take a barrel or cask and bore about twenty holes through the sides, each about an inch in diameter. Pack the heads in this as snugly as possible and head it up, making three or four holes also in the top, and set in a place where it will be dry and cool. No matter if the temperature falls a little below freezing, though it should not rise above 40 degrees in the place of storage. The cabbage should not be handled when frozen, but allowed to thaw gradually without any sunlight. They could be kept even longer if buried in the earth, but, in that case, the barrel should be inverted so that the holes would be in the bottom, and no water must be allowed to stand in the pit.

Horticultural Notes.

Mr. L. W. Ashby, of the Locust Grove herd of pure English Berkshire swine, Calhoun, Mo., has just received a very important addition to his herd in the imported boar Royal Toronto 4577, a first-prize winner at three of the leading fairs in Canada in 1882. Mr. Ashby is evidently bound to be at the head and front of Berkshire swine in his county. He makes an additional statement that he has made transportation charges on this one hog were \$53.15, a grand price in itself, but that is what the best breeders have to stand. It is evident, however, that men who buy first-class breeding stock and pay such charges, cannot sell young stock at very low prices.

KEEPING SWEET POTATOES.—The following recipe has proven entirely successful for six or eight years: Take large dry goods boxes and line by pasting three or four-ply paper all over the inside of the boxes to make them air-tight, then place them up stairs where the heat will not affect them. As soon as the potatoes are dug, wrap each in a piece of paper, twisting the ends of the paper close about each end, then pack the box closely, and when the weather gets very cold, cover the box carefully and closely with pieces of carpet, and when the weather is warm, remove the coverings. If the potatoes get too warm or have a musty smell, take them out of the box till they "cool off," then repack them. In the spring remove all coverings from the boxes. By this method I keep them all the year.

It is not generally known that squashes, melons and cucumbers will mix and hybridize if planted near to each other, and may, although planted at a distance, by the bees bringing pollen from one plant to another. Not only is the seed made worthless, but the fruit is spoiled for use, as the flavor is mixed. This has been doubted; but two years ago I grew melons and cucumbers together, in adjoining beds to test the question. Some of the melons were all right and some of the cucumbers, but there were a great many melons that were too much like cucumbers and too many cucumbers like melons. One cucumber was distinctly half and half, being partly netted and divided into sections. Most of the melons were uneatable. Since then I have chosen to grow melons in the garden and cucumbers at the farthest end of the farm. Watermelons do not seem to mix; they bloom much later than musk-melons, and I have them growing side by side all right.

A TERRIBLE PROPHECY.

The Red Sunsets, Cyclones and Earthquakes Foretelling Coming Disaster—How to Meet It.

The recent mysterious appearances following sunset and preceding sunrise have attracted wide attention from students of the skies and the people generally. During the days of recent weeks the sun seems to have been obscured by a thin veil of a dull leaden hue which, as the sun receded toward the horizon, became more luminous, then yellow, then orange, then red; and, as the night settled down upon the earth, a dull purple. At first it was thought these appearances were ordinary sunset reflections of light but it is now pretty certain that they are either the misty substance of the tail of some unseen comet, in which the earth is enveloped, or a surrounding stratum of world dust or very small meteors. Professor Brooks, of the Red House Observatory, Phelps, N. Y., has turned his telescope upon these objects and discovered what he thinks are myriads of telescopic meteors. If it is unorganized world dust, or decomposed vapors, as the *Democrat* and *Chronicle* of Rochester, N. Y., remarks: "How is this matter to be disposed of? Will it settle and form a deposit upon the earth, or remain a partial opaque shell about the earth to cut off a portion of the sun's light upon it?"

Whatever the mystery is, there is no denying that some very strange forces are at work in the upper air. The terrible tornadoes and cyclones which have swept our own country, and the fearful volcanoes and earthquakes which have destroyed so many cities and thousands of people—the tidal waves which mysteriously rise and fall on coasts hitherto unvisited by them—the tremendous activity which is evident in the sun by the constant revelation of enormous spots upon its surface—all indicate unusual energy in the heavenly bodies.

These circumstances recall Prof. Grimmer's prophecies that from 1881 to 1887, the passage of the five great planets—Mars, Neptune, Jupiter, Uranus and Saturn—around the sun would produce strange and wonderful phenomena. He says:

"The waters of the earth will become more or less poisonous. The air will be foul with noxious odors. Ancient races will disappear from the earth." He attempts to prove his prophecy by the fact that in 1720, when Mars and Saturn made their passage around the sun, coincidently great destruction and mortality visited all parts of the globe. He also found the same results in previous perihelion passages of the planets, and argues that these circumstances always produce epidemics and destructive diseases which will befall the skill of the most eminent physicians; that the poor will die by the thousands, the weak and intemperate falling first, those whose blood has been impoverished by excess of work or dissipation next and only those who are in comparative vigor shall escape to enjoy the era of renewed activity and prosperity which will follow the period of destruction.

Inasmuch as the entire world seems subject to the sway of the heavenly bodies no part of the earth, he thinks, can escape scourging. He even predicts that America will lose over ten millions of people; that farmers will be stricken with fear and cease to till the soil; that famine will make human misery more wretched. That hundreds will flee to overcrowded cities for aid in vain. That sudden changes in ocean currents, temperature and surroundings will entirely transform the face of nature and climate of countries; that the air will be so foul with malaria and other noxious gases; that those who survive will be troubled with disorders of the digestive organs.

That many who escape other ills will be stricken with dyspepsia and suddenly pass away, while others will grow thin and drag out a miserable existence in indescribable agony for weeks. Neuralgia pains in different parts of the body will torment them. They will easily tire and become despondent. A faint, hot feeling will be succeeded by chilly sensations while hallucinations and dreams of impending ill will paralyze all effort. "The birds in the air, the beasts of the field and even the fish of the sea will become diseased, poisoning the air and poisoning the waters of the globe." We are told on the other hand that those who shall pass through this period of trial will have larger enjoyment of life and health. The earth will yield more abundantly than ever before. The animal kingdom will be more prolific and life prolonged very materially. This prolongation of life will be owing to the healthy electric and magnetic influences that will pervade the atmosphere. It would perhaps seem as the present ravages of the sun, and the presence of a belt of well of cosmic matter, justified, in a measure, the prediction of Professor Grimmer, but disturbing as his prediction may be we are told for our comfort that the strong and pure blooded need have little to fear in these calamities, that those who are delicate or indolent should adopt means to keep the system well supported and the blood pure, and that the most philosophical and effective method of accomplishing this is to keep the kidneys and liver in good condition. From the testimonials of such men as Dr. D. Lewis and Professor R. A. Gunn, M. D., Dean of the United States Medical College, New York, and thousands of influential non-professional people, it seems almost certain that for this purpose there is no preparation known to science equal to Warner's Safe Kidney and Liver Cure. This medicine has acquired the finest reputation of any preparation that was ever put upon the market. It is a radical blood purifier which soothes and heals all inflamed organs, strengthens the nervous system, waxes out all evidences of decay, regulates digestion, prevents mal-assimilation of food in a philosophical and natural manner, fortifies the system against climatic changes and malarial influences and the destructive agencies which seem to be so abundant in these "evil days."

It is not our purpose to dispute the correctness of Professor Grimmer's prophecies. As we have said, the marked disturbances of the past few years would seem to give a semblance of verification of his theory. It is certain, as above stated, that we are passing through what may be regarded as a crucial period and it is the part of wise men not to ignore, but to learn to fortify themselves against the possibility of being overcome by these evils. It is a duty which each man owes to himself, and his fellows, to mitigate as much as possible the suffering of humanity and in no way better can he accomplish this purpose than to

see to it that he himself is fortified by the best known preparation in the strongest possible manner and that he exert the influence of his own example upon his fellows to the end that they, too, may share with him immunity from the destructive influences which seek his ruin.

THAT HUSBAND OF MINE—Is three times the man he was before he began using "Wells' Health Renewer." \$1. Druggists.

If your horses have sore shoulders, scratches, cuts or open sores of any kind use Stewart's Healing Powder.

HYATT'S LIFE BALSAM FOR THE BLOOD.

EXPERIENCE HAS PROVED THE fact to thousands of sufferers from SCROFULA, SYPHILIS, GLEET, etc., that HYATT'S LIFE BLOOD (which is the parent of so many diseases) that this old and renowned remedy is more effective and has wrought more absolute cures than any other medicine on earth. It purifies the blood, cleanses the system, and cures all diseases of the blood. In the treatment of SKIN DISEASES, its operation is greatly aided by the use of GLENN'S SULPHUR SOAP, which eliminates the poisonous secretions as they come to the surface. The genuine HYATT'S LIFE BALSAM is prepared only at the Laboratory of C. N. CRITT, TERTON, Proprietor, 115 Fulton Street, N. Y. City, and sold by all Druggists.

Trees and Plants.

Nursery on Olive Street Road, 5 Miles from St. Louis.

Courthouse.

APPLE TREES, two to four years old; Early Harvest, Red June, Red Astracian, Maiden's Blush, Rambo, Jonetown, Yellow Belleflower, Winesap, Rome Beauty, Smith's Cider, Ben Davis, Willow Twig, and many others. Price, 20 cts.

PEACH TREES—Amenden, Hale, Troth, Crawford (Early and Late), George the Fourth, Old Mixon, Stamp of the World, Smoak, Heath, etc., etc. Price, 20 cts.

Shade Trees: Carolina Poplar, Tulip, Linn, Sycamore, Elm, Maple, Ash, Horse Chestnut, Red Bud, Dog Wood, etc., 50c to 75c.

Flowering Shrubs in large variety, 50c. Small Fruits, such as Raspberries, Currants, \$1.50 per doz.; Strawberries, \$2.00 per 100—the choicest kinds.

Evergreens—Norway Spruce, Scotch Pine, Austrian Pine, Red Cedar, Arbor Vitae, Irish Juniper, Savin, etc., 50c to \$1.

Address: COLMAN NURSERY Co., Care Rural World, 600 Olive St.

THE BAYLES SOUTH ST. LOUIS NURSERIES

Specialty of Growing

Apple, Peach, Pear,

(Dwarf and Standard),

CHERRY AND PLUM TREES,

Also Everblooming & H. P. Roses,

And turning Nurserymen and Dealers at Lowest Rates. Correspondence solicited.

S. M. BAYLES, South St. Louis, Mo.

Grapevines.

I have for sale an excellent lot of Elvira, Missouri Riesling, Goethe, Martha, Noah, Norton, and other desirable kinds of Grapevines. Send for prices, wholesale and retail. Address: C. T. MALLINCKRODT, St. Charles, Mo.

BEST MARKET PEAR.

EARLY CLUSTER. RASPBERRY PLANTS FOR SALE. Turner, Trask, Cuthbert, at low rates, by the thousand. Also Rubies and other new varieties. SAMUEL MILLER, Bluffton, Mo.

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309 MARKET ST., ST. LOUIS.

Buy all kinds of supplies for farmers at wholesale prices. Consignments of Farm Produce, Wool, Hides, Furs, Grain, etc., received and highest market prices obtained, quick sales and prompt returns made. The only reliable place for the farmer to sell. Send in your orders for goods, and make your shipments with the understanding that you will be fairly dealt with. We need no references; our own is as good as any in St. Louis.

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Fruits in their Season a Specialty.

We offer to shippers 5 years experience, promptness, and the best location in the city.

Stencil plates, price currents, etc. free.

We Are Now Ready

to book orders for early shipments for very choice fruit and two years Climbing Trees, leading varieties at \$80 per 1000; Peach Trees, 3/4 to 5 ft., \$60 per 1000; Peach Trees, 2 1/2 to 3 ft., \$30 per 1000.

An immense stock of the above for sale by Western Reserve Nurseries, Perry, Lake Co., Ohio. Correspondence solicited.

Northern Sugar Cane Manual

By PROF. WEBER & SOVELL, etc., etc. Of Champagne, Ill. Sent free. Application to GEO. S. SQUIER, Buffalo, N. Y.

\$72 A WEEK, \$12 a day at home easily made. Cutty outfit free. Address: Tack & Co., Augusta, Me.

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OF ALL PLANTS, FOR ALL CROPS, FOR ALL CLIMATES. All are tested; only the best sent out. Grain and Farm Seed Manual (History and best methods of culture of Grain, Root Crops, Grasses, Fodder Crops, etc., etc.) only 10 cts. Annual Catalogue and Price List cut free.

SIBLEY'S SEEDS HIRAM SIBLEY & CO., CHICAGO, Ill. Rochester, N.Y.

ANDRETH'S CENTENNIAL SEED CATALOGUE

"GARDENERS' COMPANION." PRICE 10 CENTS. The most complete and brilliantly embellished Seed Catalogue ever published, costing fifteen cents. The article on Market Gardening under Glass is worth twenty times the price. ONE YEAR'S FOUNDED ONE YEAR'S FOUNDED. One Guide for Garden and Farm. To all sending us TEN CENTS in stamps, we mail a copy, and on orders for seed will give credit for that amount. Address: LANDRETH & SONS, Seed Growers, Look Box, Phila., Pa.

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DEDERICK'S HAY & COTTON PRESSES.

are sent anywhere on trial to operate against other presses, the customer keeping the one that suits best. No one has ever cared show up any other press, as Dederick's Press is known to be beyond competition, and will sell with the rapidity of any other. The only way to decide the superiority of Dederick's Press is to see it in operation, and see the statements and testimonials of those who have used it. Working any other press alongside of Dederick's always sells the purchase of Dederick's Press, and shows it is well to stock up. Address for circular and location of Western and Southern stores and Agents.

J. E. DEDERICK & CO., Albany, N.Y.

Queen of the South

PORTABLE

Farm Mills,

For Stock Food or Meal for Family use, 10,000 IN USE. Write for Pamphlet.

W. S. ROBERT & CO., St. Louis, Mo.

OUR NEW NO. 7 FEED MILL.

The 8th Wonder of the World.

Don't fail to get description before buying. Wanted to grind faster and better than any other same price. The lightest draft mill. Has double rollers and grinds all kinds of grain. Big, Little, and New. The only mill that will grind with Run on.

J. A. FIELD & CO., St. Louis, Mo.

"DRAW CUT!"

BUTCHERS' MACH

COLMAN'S RURAL WORLD

THIRTY-SIXTH YEAR.

BY NORMAN J. COLMAN

PUBLISHED WEEKLY AT

ONE DOLLAR PER YEAR.

ADVERTISING: 25 cents per line of space; reduction on large or long time advertisements. Address NORMAN J. COLMAN, Publisher, 600 Olive Street, St. Louis, Mo.

(Advertisers will find the RURAL WORLD one of the best advertising mediums of its class in the country. This is the uniform testimony of all who have given it a trial. Many of our largest advertising patrons have used it for more than a quarter of a century, which is the highest possible recommendation of its value as an advertising medium.)

FULL particulars of the farmers' meeting at Higglsville, Mo., will be found in the second column of our 7th page.

A. C. MOORE & SONS, Canton, Ill., write us that they have shipped to date since July 1st, 481 pigs, and have a nice lot left, are going off rapidly. Pretty good Poland China business that, for one firm.

THE fruit shipments this year from the Hudson River Valley have far surpassed those of any previous year. Of grapes alone nearly 500 tons have been shipped daily. While more varieties are raised, the Concord is the standard.

THE man who complains the bitterest of hard times and talks the loudest of grinding oppression, is the fellow who keeps his hands rammed the deepest in his breeches pockets, and whose breeches seat is often found on a door sill or needing a patch.

DOES the address tag on your paper read Dec. 1893? If so, renew at once, so as not to miss a single number. We stop the paper to all subscribers when the time paid for expires. Always renew a week or two in advance, so that your name need not be taken from the mail list.

C. J. BARRE, Woodbury Co., Iowa, in renewing his subscription says: "I believe you have done a good work for the country by the interest you have taken in the Sorgo industry, and the large amount of information that you have given to the public on that subject, and besides all this, like the RURAL WORLD otherwise."

AMONG the many horses entitled to credit for general excellence as farm animals none have been overlooked to the extent that the English draft horse has. One of the staunchest, hardiest and most healthy, it should command the attention of farmers, who may address George E. Brown & Co., of Aurora, Ill., importers and breeders.

THE present season has been the most favorable for potatoes since 1875. The October report showed a better condition by 3 to 4 per cent. than the census crop, that of 1875, when the yield was about 170,000,000 bushels. The yield per acre is 93 bushels, which will make the total product about 135,000,000 bushels, or 31-2 bushels per capita as the country's supply.

AN Indiana farmer who raises many turnips harvests them late and stores in trenches. The trenches are two feet deep, about a foot and a half wide and of any desired length. He puts the turnips in, filling the trench about half way to the top, then puts on a light covering of soil. As the weather becomes more severe he adds more covering until the trench is full.

THE decree prohibiting the sale of American pork in France has been repealed. This, in connection with the short corn crop, is giving a boom to pork, and it looks as though prices must still advance. We are glad to see the rise before hogs have all left the farmer's hands. The packers are fighting hard for low prices, but the speculators see the opportunity to realize advances and are putting up prices.

ANY one at all interested in farming, fruit growing or any branch of stock breeding can certainly well afford to pay one dollar for such a weekly as COLMAN'S RURAL WORLD. The friends of this paper ought to send in by the score and the hundred new subscribers to it. In real practical value to the farmer, fruit grower and stock breeder, it is candidly believed it has not a superior in America.

MISS FRANCES E. WILLARD, of Chicago, has been invited to deliver an address before the Farmers' Convention which meets at Madison, Wis., under the auspices of the State Agricultural Society, during the first week in February. Her subject will be, "Temperance and Amusements at State Fairs." Ella Wheeler will deliver a poem, and Prof. E. G. Morrow, of Chicago, will deliver a lecture on "Fat Stock and its Lesson."

FARMERS, as the cold weather comes on, do not neglect the plain and practical rules of health. There is an old and very mischievous idea that in winter greasy food is needed, food full of carbon, in order to enable the individual to pass the cold weather in comparative comfort. Do not model your meals on the lard and buckwheat plan. It is good digestion, free circulation you need, not stomachs encumbered by struggles with food that can not be digested, nor blood laden with superfluous matter to be burned out by the overworked lungs. Plenty of good air, light diet and warm clothing are more desirable than the cakes reeking with grease, and vegetables toughened and sodden with the same unwholesome substance. Your health and comfort, under all ordinary conditions, are in your own hands. Do not destroy them.

THERE is food for reflection in the following paragraph from Walter Brown & Co.'s latest wool circular. The italics are ours, otherwise we quote verbatim: "It may seem strange that with the wool and woolen interests in foreign countries all in a prosperous condition, that these industries here, especially woolens, should be in such an unsatisfactory state; but the fact is, that with our mills depending for the distribution of their productions solely upon the home demand, the surplus of goods that has

existed for the past year or more, has had a very depressing effect upon manufacturers. It is hoped, however, that some reflection of the improvement abroad and that with a better consumptive demand for woolens, arising from more seasonable weather, that there will be more activity in the staple and a maintenance, at least, of the present basis of values."

THE statistics of the custom house show that over one million dollars worth of eggs were imported from Europe for the year ending June last. With the claim set up by our Butter and Egg Associations, that our egg product amounts yearly to a sum nearly equal to the wheat crop, it would seem as if our people ought to be content with the amount of home production. But America is the most extravagant nation in the world, and they are determined to have all they want. And as we increase in population and in wealth, our surplus of articles for exportation will rapidly decrease.

Not only eggs, but we learn that large quantities of apples are now arriving in this country from Holland, and from the short crop, it is expected this importation will increase this winter and next spring.

A WELL-KNOWN physician called at the Rural office a few days ago while we were testing a new variety of grape. He said: "Let me caution you. Don't ever eat the seed." He then explained how they were liable to become lodged in the intestine, causing inflammation and leading to fatal disorders. Well, if we must separate the seed from the pulp of every grape eaten, we will give up eating grapes altogether.—Rural New Yorker.

THE physician was right—it is far better not to eat the seeds of grapes. Besides, to simply squeeze the pulp of the grape from the skin and swallow it, as the mass of grape eaters do, is not the proper way. One never knows how good a grape is until he separates the seeds from the pulp and thus brings the delightful flavor of grape into prominence. Life is not so short but that time can be taken to properly eat our food, whether it be grapes or other fruits.

EX-SECRETARY BLAINE has called attention to himself by publishing the outlines of a scheme for getting rid of the surplus in the Federal Treasury without reducing taxes. He advocates the retention of the internal revenue system, and the distribution of the proceeds from spirits and malt liquors, which last year amounted to \$86,000,000, among the States, in proportion to population. This, he claims, would enable many of the States to entirely dispense with any State tax, and would greatly lighten the burden of taxation in others which are now heavily burdened with debt. "The houses, the farms, the factories, the stores, the shops," he says, "all feel the State tax as a heavy burden—a burden unrelieved by any form of indirect taxation. Why, therefore, should not the States be permitted to have the tax on spirits for their own benefit if the National Government does not need it?" One reason is a constitutional one. Another is the plain truth that if the General Government has more money than it needs, it ought to reduce the tariff taxes on the necessities of life. Mr. Blaine's proposal is really a high tariff device.

The Cattle Yard.

J. W. Stillwell, Troy, Ohio, reports the sale of a car load of Holstein heifers and one bull to W. B. Clark, superintendent of Nashville, Tenn., Insane Asylum. He has also just returned from quarantine 100 head, ninety of which are young heifers, bred in Holland.

Messrs. F. W. and W. A. Smith have just returned from Guelph, Ontario, Canada, where they purchased 10 head (5 bulls and 5 cows) of very fine Hereford cattle of the celebrated Stone herd and of the Government Agricultural Farm located at the same place. These animals are beauties and range in age from 8 to 19 months.—Columbia Statesman.

A despatch from Ottawa, Canada, says that according to returns received by the department of Agriculture the number of cattle shipped from Canadian ports up to Nov. 1 of this year was 50,656; sheep, 100,113. Space has been engaged on steamers leaving Boston and Portland about Jan. 1 next for 5,019 cattle and 13,612 sheep. The exports for the year will be 55,674 cattle and 113,625 sheep, against 53,738 cattle and 75,905 sheep in 1892.

Commissioner Loring is engaged in preparing his report of the cattle convention, which met last month in Chicago. The committee of twenty appointed by the convention will meet at the Agricultural Department on the 10th of January next, and prepare a memorial to Congress asking the Legislature for the suppression of the spread of diseases among cattle. Mr. Loring says that he expects the movement to be supported. The President, he says, is in sympathy with it.

Col. L. F. Muir having declined re-election as Secretary and editor of the American Short-horn Breeders' Association, Mr. W. T. Bailey, of Buffalo, was tendered the position at a salary of \$3,000, the society to furnish necessary clerk hire. Mr. Bailey has accepted and will soon enter upon his new duties. The President of the association is to receive \$10 a day while engaged in the discharge of his duties. Vol. XXV is about ready for delivery; price \$5 to members and \$7 outside.

The first annual meeting of the Duroc Jersey Swine Association was held Nov. 15th at the Grand Pacific Hotel, Chicago, Ill. Over forty prominent breeders of the Reds were present, representing seven or eight different States. Most of them expressed their confidence in the future for the Reds, and pledged their hearty co-operation to place the herd register on a sure foundation. After much discussion of constitution and by-laws, the following officers were elected:

President—G. W. Stoner, LaPelle, Ill.
Secretary—C. H. Holmes, Grinnell, Iowa.
Treasurer—Geo. A. Lytle, Elkhorn, Wis.
Executive Committee—F. D. Curtis, Charlton, N. Y.; W. H. Fulkerson, Jerseyville, Ill.; Samuel Taylor, Grove City, O.; J. N. Rozelle, Breckenridge, Mo.; E. A. Barnett, Dexter, Iowa; Geo. W. Clark, Cedar Falls, Iowa.

Also vice-presidents from several States. Membership was placed at two dollars, and liability to an annual assessment of an equal amount, if necessary, in order to publish the herd book registry. One dollar each animal

for non-members, and fifty cents for animals owned by members.

Col. F. D. Curtis, the clever, genial, and experienced chairman of the executive committee, paid the RURAL WORLD a visit on Monday last when in the West investigating the diseases of cattle. He paid our stock yards and packing establishments, a visit during the day and left for the East at night. Like many of the very best men from the eastern States, Col. Curtis has seen much in the West to surprise him, and has wrapped it all up in that great, bushy, gray-covered dome of thought of his, to be utilized at home as occasion requires in the near future. We shall expect him to say some nice things of our country and our people; their enterprise, their institutions and their good behavior. We certainly know of no one more capable or who will undertake the task with a more conscientious regard to truth.

EDITOR RURAL WORLD: We have recently sold 16 head to Underwood & Emery, of Lake City, Minn., for \$6000; 11 head to F. P. Lambert of Leroy, Minn., for \$3000; 1 to Charles Nichols of Cresco, Iowa, for \$350, and 5 head to Buchanan Bros. of Chicago, Ill., for \$1700. Have three parties here now; just sold one of them, F. S. Porter, 5 head, \$1600. Still they state, Mr. Bull Jacob, for which I paid \$5000, is home and at work; shall breed him to Pride of Twist. Expect to get as much as he cost me for her calf. Yours, etc., J. W. STILLWELL & CO.

Troy, Ohio.

EDITOR RURAL WORLD: I sold a car load of rams this week to Mr. Frank Austin, of Colorado Springs; have nothing left but last spring's lambs for sale. Weather nice. Stock doing well. Plenty of grass and rough feed in this part of Missouri, to winter all the stock here if there was no corn. Corn is worth 30c, oats 22 to 25c; hay is very low. Stock of all kinds high, but sheep are very low. But I predict this the lowest time for sheep for some time to come. I sold my rams, 43 head, at \$10 per head, the lowest price I ever sold at, that I remember of. Please find enclosed cash for my advertisement; have had two buyers from it already. P. S. ALEXANDER. Lone Jack, Mo.

COL. COLMAN: Will you please inform me by return mail, whether I can get Holstein cattle in Missouri, or not? As I am very desirous to get a start of those cattle, and I can't find any advertised nearer than Elgin, Ill. If you know of any in Texas, please say so, as I would rather get them acclimated. I know of no one to get this information from but you, hence my presuming to trouble you. Please say what grasses are the best for pasture in Texas? J. J. CONKLIN.

P. S. Being so well-pleased with your paper, too, has led me to apply to you for information. J. J. C.

You will find them numerous advertised in the RURAL WORLD, and can hardly make a mistake in buying from either one. The Holstein is on a bigger boom, just now, than any other breed of cattle, and it looks as though those who buy now can hardly fail to make money out of them. We know no breeder in Texas who has them. It will afford us pleasure to aid you further, if necessary, in this or any other respect.

COL. COLMAN: Sometime since I had the pleasure of directing your attention to the extraordinary statements made by parties, of a brand of wheat which they had for sale. It created a kind of "tempest in the tea-pot" for the moment, but they never attempted to establish their position by any kind of evidence. I now have a similar case, and hope you will afford me an opportunity of reaching my fellow farmers with this, as you did with that, and don't you mind the consequences.

This time I am on the Jersey business and the Holstein. I see by the papers—and the RURAL WORLD is guilty of a part of it—that the Jersey cow, Mary Anne of St. Lambert, finished a five month's test of her butter capacity on the 30th of last October. During that month she yielded 876 lbs. of milk which made 94 lbs. 6 ozs. butter. In the 155 days during which the test has been made she has produced 511 lbs. 8 ozs. of butter, being an average of nearly 3 lbs. 4 ozs. per day. And that the Holsteins had to beat the Jersey by some means, hence we find the following report current in regard to that breed: "The recent record of 'Mercedes,' vanquished her Jersey competitor and raised the record higher than ever before reached, is still fresh in the minds of our readers. Her yield for 30 consecutive days was 99 lbs. 6 ozs. 1/2 unsalted butter."

Well, now, Colonel, I am dubious about this too, and would like to know what evidence you have of these. They are so far out of the way of common farmers, who grow only 15 bushels of wheat to the acre, and produce only four pounds of butter per cow, a week, that I am compelled to doubt even the evidence of the statements made in the RURAL WORLD. Tell us, won't you, what there is in it, for we farmers want the best to be had.—SUBSCRIBER.

Glasgow, Mo.
Reply: On the matter of the wheat we have answered you; on that of the Jersey and the Holstein we think we can assure you that the record is reliable. At this time we cannot lay our hands on the documents, but you need not doubt the figures. Any man who buys a Holstein cow, however, under the impression that her milk will make for him 90 lbs. of butter a month, is going to be marvellously fooled, and the same is true of the Jersey. Still, and notwithstanding, they are the best butter breeds in the world, and will pay any man to handle who has the proper facilities for working up and disposing of the product.

An Inter-State Association.

Many important meetings were held at the Kansas City and Chicago Fat Stock shows, and they were generally well attended because the meetings were calculated to attract those interested in such matters, and in addition had the attractions of the Fat stock show as well. We make room for one of these meetings this week as illustrative of the drift of public sentiment both in Missouri and in Kansas.

Breeders will notice the particular care evinced in the formation of this inter-state association and the limit set to the number of animals to be offered by each breeder. We take an abbreviated report of this meeting from the Kansas City Live Stock Record:

Mr. J. L. Hickman—I move that the breeders of Missouri, Kansas and other states, that wish to join, form an association for the purpose of furthering the Short-horn cause and holding a public sale of fine cattle at the Fat Stock Show here next fall.

and cut out any animals that they may think objectionable.

The following resolution was then adopted: Resolved, That we the breeders here present form ourselves into an Inter-State Association for the advancement of the Short-horn interest.

Mr. Elliott—Too much stress cannot be put upon the point that the cattle to be sold are representative Short-horns, and only the best animals admitted to the sale. On motion of Mr. J. L. Hickman a committee of five, consisting of the following gentlemen were appointed to nominate officers: L. P. Muir, Mr. Elliott, Dr. Cundiff, S. C. Duncan and Mr. Burnham.

They returned the following ticket which was unanimously elected: Dr. W. H. H. Cundiff, Pleasant Hill, Mo., President; W. A. Harris, Lawrence Kas., Vice-President, and W. L. Harding, Kansas City, Secretary.

Executive Committee—H. H. Lackey, Peabody, Kas., S. C. Duncan, Smithville, Mo., and A. J. Powell, Independence, Mo.

Mr. Burnham—Moved that the Executive Committee be given full power to decide upon what cattle shall be admitted into their sale of representative Short-horns—Carried.

It was agreed that the association duplicate the sheepskins at the next Fat Stock Show for the best Short-horn thoroughbred steer or cow bred in Missouri or Kansas. The following gentlemen came forward and signed the roll:

A. W. Rollins, Manhattan, Kas., H. H. Lackey, Peabody, Kas., Johnson & Williams, Silver Lake, Kas., Guild & Pratt, Silver Lake, Kas., Chas. G. McFadden, Fulton, Mo., John L. Hickman, Butler, Mo., R. L. Raymond, Liberty, Mo., A. J. Powell, Independence, Mo., J. L. Ashby, Lathrop, Mo., S. C. Duncan, Smithville, Mo., W. H. H. Cundiff, Pleasant Hill, Mo., B. F. Winn, Edgerton, Mo., A. H. Cravens, Liberty, Mo., L. Bennett, Lee's Summit, Mo., John H. Watson, Lawson, Mo., J. E. Guild, Silver Lake, Kas., Powell, Bros., Lee's Summit, Mo., S. M. Powell, Independence, Mo., A. M. Powell, Lee's Summit, Mo.

A canvass was next made among those present for pledges of cattle for the sale of representative Short-horns, and resulted as follows:

H. H. Lackey, three head; S. C. Duncan, five head; B. F. Winn, five head; Dr. Cundiff, five head; A. J. Powell, two head; B. L. Raymond, five head; J. Powell & Son, two head; John Watkins & Bros., five head; A. H. Cravens, five head; H. C. Duncan, Osborn, Mo., five head; L. Bennett, five head; A. A. Walker, Pleasant Green, Mo., five head; Seth E. Ward & Son, Westport, Mo., five head. Adjourned.

The Republic of Honduras as a Cattle Producing Country.

EDITOR RURAL WORLD: You have at times referred to the Northern States of Mexico, as presenting an excellent field for extending our stock ranges, and at some time furnishing a good market for our blooded cattle, to grade up the native stock. The locality undoubtedly possesses many advantages, and these are so strongly appreciated in both Europe and the United States, that capitalists have already invested in grazing lands to such an extent, as to materially advance prices.

With your permission I will submit some facts taken from a letter received from an entirely reliable source, on the advantages offered by the Republic of Honduras, Central America, which in my judgment, entitle it to a high position among cattle producing countries. The easy communication between the grazing regions and the coast facilities for shipping to foreign ports, together with the superior quality of the native cattle, all point to Honduras as a desirable country for such investments. The communication referred to, is dated October 26th, 1893, and states: "Our cattle are not as large as the Texas long horned, but they are much rounder, smoother built, sleeker, and in every respect a better class of stock."

I have never heard of any disease, and do not believe there has ever been any in this country. On the coast yearlings would sell at from \$2 to \$4 each; two to three-year-olds at \$3 to \$5, and three to four years and up to five at from \$14 to \$18 per head, and perhaps fine lots a little better. Deduct \$3 to \$5 from these prices for value in the interior, and for small lots much more.

Cows are cheaper. Government restricts by an excessive duty (only) an export tax, the exportation of cows; to ship these special arrangements should be made with the Government. Steers and bulls have to pay \$3 per head export tax. There never has been any shipments made direct to England. There is a regular line of English steamers, calling at this port (Puerto Cortez), and in a direct line also to New York, and three lines direct to New Orleans. Improved breeds can be brought here free of all custom charges.

All the Eastern departments of Honduras are easy of access. The department of Olancho is the most important cattle department. However Santa Barbara, Gracias, Comayagua and Yoro, are also fine grazing departments.

The departments of Santa Barbara, Gracias, Comayagua and part of Yoro ship via Puerto Cortez to British Honduras (Belize) and many are driven to Guatemala. Olancho and part of Yoro ship via the port of Trujillo to the Island of Cuba, say from twenty to thirty thousand head yearly of four-year-old stock.

Good herdsmen are worth in the interior, about \$100 per year, and rations; assistants from \$25 to \$75 cts per day.

Our native grasses are better and richer than you find in Texas. I am told by parties who ought to be well informed, that three head of cattle can be supported here on the same territory required in Texas for one.

The entire country is splendidly watered by quick-running streams, which uniting form considerable rivers. Droughts rarely if ever occur. There is no doubt of the safety of this class of investments, and I know of no reason why they should not be as remunerative here, as in any part of the world. One thing is certain, native ranchmen (for there are no other), who give attention to their business, are all well to do, and many of them rich. On the cattle ranges in the interior the air is bright and bracing, the climate genial, nights always cool. No disease known except the acclimating fever, which is not so bad as the Western and Jersey fever and ague. I am tempted to say, for I really believe it, that this country offers unusual inducements to good stock raisers and dealers, and activity and capital will be sure to meet with success.

The writer of the above has lived in Honduras for many years, upwards of twenty years I think, and his statements can be implicitly relied upon. If the subject is interesting I will be pleased to communicate to you again. I should have stated that the export duty of \$3 per head on beef cattle will be discontinued after the 1st of March next.

AGRICOLA.

Notes—Correspondence.

Coming Meetings.

Dec. 18th and 19th, Farmers' Institute, Higglsville, Mo.

Dec. 18th, 19th and 20th, Illinois State Horticultural Society, Bloomington.

Dec. 26th, 27th and 28th, Second Annual Convention Indiana Cane Growers, Indianapolis.

January 16th, 17th, and 18th, Wisconsin Dairymen's Association, Lake Mills.

January 16th, 17th and 18th, Mississippi Valley Cane Growers' Association, St. Louis, Mo.

—The Texas farm advertised for sale in this issue has produced two crops of sheep from Northern cane this year. The owner is compelled to sell because he is afflicted with inflammatory rheumatism.

—Can you furnish us any apple seed of good quality? If so, please state price per bushel. —Kinley, & Co. It would pay those who have seed to advertise it in our columns. So also with forest tree seed and nuts.

—Please inform me in the RURAL WORLD something about bone fertilizers. We read of ground bone meal, crushed bone, bone flour, bone ash, decorated bone, etc. Now we want to know what the difference is, and which you consider the best for a market gardener to use. —A Subscriber, Eureka Springs, Ark.

—Many of our readers have yet failed to supply themselves with bulbs for winter window gardens. There is yet time, and those most cherished of winter blossoms may be had long ere the snow has disappeared or the frost is out of the ground. For Hyacinth, Tulip or Crocus bulbs write the Plant Seed Co., St. Louis, who have them in abundance, and as well, lists of varieties and prices, and an essay on the mode of cultivation, their merits, beauties, etc.

—Please give me the address of some reliable firm that handles cotton seed meal. I am thinking of attending the Sorghum Convention in January, and want to go down to Centerville, Reynolds Co., Mo. What is the best route? —B. H. B., Oxford, Ohio. For cotton seed meal, address A. J. Child & Co., St. Louis, Mo. The best route to Centerville that we know of is by Iron Mountain & Southern Ry. to Piedmont, 127 miles, thence inland by either stage, buggy, or horseback—some 30 miles more.

—COL. COLMAN: I desire to ship a large amount of poultry and find it difficult to get the feathers off without the aid of hot water. Will it not do to scald them? If not, why not? Please answer through RURAL; it is doubtless a matter many would like to be informed on. —Farmer. This is a matter that concerns a large number of RURAL WORLD readers and we shall be glad to have suggestions from those who have had experience. And just here we may remark that, if each should say "I will wait to see what others write first," "Farmer" will never get an answer to his question. Let every one having anything to report write at once and the enquirer will get the information in time for this season's work.

—During the long winter evenings the mind seeks recreation from the ordinary routine of life. There are no new sources of pleasure opened this season so prolific of a good return, as the new book by Mark Twain, entitled "Life on the Mississippi" in pursuing which the reader can readily lose himself, and in imagination find he is a passenger on one of the boats of the olden time, listening to the superstitious conversation of the pilot or it may be, enjoying the wild scenery on either bank as the boat glides by. With all this, the imaginary passenger will find he is learning more of the strange geography of the river on his short voyage than he ever before dreamed of, unless he has himself been a river pilot. The book is profusely illustrated and the typographical work is a credit to the publisher, James E. Osgood, of Boston. The agent for the sale of the work in the West is James H. Chambers, North Third Street, St. Louis.

The Horseman.

The number of additions to the 230 list during the season just closed will probably exceed 150.

Clingstone and the balance of W. J. Gordon's stable will be exercised this winter on a covered track, now being built for them, of less than a quarter of a mile in length.

The fastest mile ever made by an American race-horse is Ten Brock's, 1:39; an American turfman doubt Brag's unofficial time of 1:37-4-5 in his recent race for the Brighton cup in England.

In a free-for-all race, trotted at Dallas, Texas, Nov. 8 and 9, the first heat was won by the bay gelding St. Cloud in 2:24; the second by Sleepy Joe in 2:21; the third was a dead heat between Sleepy Joe and Robert McGregor in 2:19; the fourth and fifth were won by Robert McGregor in 2:21, 2:21; the sixth and seventh by Sleepy Joe in 2:19, 2:19. Second money went to Robert McGregor, third to St. Cloud and fourth to France's Alexander.

The stomach of the horse is comparatively small, holding about three gallons, whilst the ox possesses no less than four stomachs, the first of which is larger than that of the horse. This affords us a very important lesson at the commencement; that while the ox is so constructed as to consume large quantities of food at a meal, the horse, on the contrary, requires a more moderate quantity of a more nutritious nature, and to be fed often.

Principles appears to produce the best results from mares of Hambletonian blood. The wonderful two-year-old filly, Femme Sole, which took first premium in her class at the late Louisville, (Ky.), fair, is by Princeps; dam an inbred Hambletonian, being a daughter of Messenger Duroc, out of a mare by Edward Everett, both of which are sons of Rysdyk's Hambletonian. Femme Sole has trotted a trial half-mile in 1:11 1/4. Trinket (2:14) is by Princeps, her dam Ouida being a daughter of Rysdyk's Hambletonian.

It is reported that Charles Marvin has a very high opinion of Nutwood as a trotter. He says he has ridden faster behind him than any other horse he ever drove. As Marvin gave Snuggler his record of 2:15 1/4 and has driven Piedmont a full mile in 2:10, it is evident that Nutwood has much more speed than his record of 2:18 1/2 would indicate. He is bred to trot however, his sire, Belmont, being a son of Alexander's Abdallah, while his dam, Miss Russell, is also the dam of Maud S. (2:10 1/4).

Jos. Cairn Simpson, of California, is opposed to the use of shoes on horses. He uses only tips on the front feet. He drove his four-year-old colt, Anteo, on a full mile track, in public, with three or four timers, in 2:35—the last half in 1:10 1/4. This colt has never worn shoes, served fifty-four mares the past season, and his feet are as sound as new dollars. It proves at least that some horses can be used on the turf at a very rapid gait, without shoes, and without injury to the feet.

Mr. C. J. Hamlin, proprietor of Village Stock Farm, East Aurora, N. Y., lately bought five two-year-old fillies, daughters of Kentucky Prince, viz., Carlyle, dam Fanny Clay by Harry Clay, price \$1000; Marjorie, dam by Rysdyk's Hambletonian, grandam by old Abdallah, price \$200; Feroline, dam Lady Dexter, price \$500; Rosina, dam Rosetta, by Rysdyk's Hambletonian, \$200, making a total of \$12,000, for the lot, on an average of \$2400 each. It looks as though there was a boom in Kentucky Prince stock.

The dam approaching maternity needs, of all other animals, vitality and force, and energy and endurance. She is approaching the period when her vital powers are to undergo a strain which exceeds that imposed on the four or ten-mile racer. She must not only have the vigor and vital force to develop a healthy foetus, but she must have an extra amount of vigor to give birth to the offspring, which is the climax of nature's tax on the vitality of the female. In all the economy of nature we have no stage in the animal's history, from conception on to death, which calls for so great vitality and force, as in successfully giving birth to the offspring.

The law and practice of the trotting course deny a record to a horse who fails to equal or beat the time he starts against, and the man who thinks for a moment that his individual decision to the contrary will command respect is equal to the task of trying to break the force of the ocean's tide with a single grain of sand. A horse cannot obtain a record unless he wins something or beats something. If he does not beat another horse for a consideration, or vanquish time for premium, purse, stake or wager, there is no award and no record. The question has ceased to be a debatable one. Not until the rule is changed will the usage change. However, there is no law against a man making a fool of himself.

As winter is here, and every owner of a driving horse is troubling himself about the best way to take care of him after a drive, I will give the best according to my experience. After a drive put your horse in a stall where the wind or draft does not strike him. Don't put a blanket on him till he quits steaming, which will be from ten to thirty minutes, no matter how cold, if the air does not strike him. His body is warm and sends the sweat out to the ends of the hair. When he quits steaming, wipe the perspiration off his coat and then cover him up with a blanket. His hair will then get warm. When the horse first comes in from a drive and is immediately clothed, the steam goes into the blanket, making it wet and cold, and then the horse must get warm and warm the blankets before he gets dry.

Major Campbell Brown, of Spring Hill, Tenn., writes: "I have lately bought of Mr. John Harding, of Nashville, Tenn., (son of General W. G. Harding), the gray mare Sue, Munday, by Pilot Jr., dam by Mambrino Messenger (sire of General George H. Thomas); also, the gray mare Fanny, by Pilot Jr., dam by Copperbottom. These are the only Pilot Jr. mares that I can hear of in Tennessee. We once had a number, but all have been picked up and carried North. I have also secured the chestnut mare Delight, four years old, by Munday by Pilot Jr. Delight's dam is by Idol (Peck's), sire John R., 2:23; 2d dam Fanny by Pilot Jr."

More Care in Breeding.

Although horse breeding, especially of the heavier class, has grown in the last ten years to immense proportions, it is yet in its infancy. But, in order to make it a perfect success, there is a great need of a closer study of breeding than most of breeders devote to it.

In striving to meet the demand for large horses too much stress has been laid on the weight of the animal without considering of what that weight consists. In nearly every country through the West there are scores of stallions whose only qualification is their avoirdupois, and if castrated and relieved of their surplus fat, would not make third class geldings.

A stallion to be qualified to produce draft horses should be the personification of strength, vitality, and endurance, and in producing these essentials, fat is of last and least consequence, and it is rarely put on in excess except to cover serious defects.

It is generally admitted that no other breed of draft horses look as well in thin or moderate flesh as the

The Home Circle.

THE THREE FAMOUS HUNTERS.

Three Hunters, famous, crept along a woody
highland slope,
In which were found the fattest deer, and
toughest antelope.
Young Frank, he was the gentle, nice young
man, who slept so sound,
From morning's sun to evening's rays, asleep
so snug, was found.
They chid him, as destroyer of the famous
woodland chase,
Afrail, he said he was, to breathe—so full of
deer the place.
Against a tree, so firm he stood, the leader of
the hunt,
The deer, confused when passing,—twas his
duty to confront.
The deer mistook him for a whitish tree, and
so they passed;
But he, in sorghum much engrossed, its
treasures soon amassed.
The astute Judge C., on game laws' sore
abuse, intent was he,
The game, they passed him round; his laws,
they did not want to see.
Most lucky now, two glossy gobblers of the
highland breed,
In adverse course together fell—the Judge, he
checked their speed.
The Judge's wit, it far surpassed the game
laws' slow abuse.
The turkeys' heads together tied, and shot
with bullet's use.
From that sad day to this, no squirrel ever
has yet been seen,
Nor glossy turkeys' heads, nor rodent's tail
the legs between.
The Judge, a moral man was he, addicted not
to use
A diabolic word, nor falling friends to much
abuse;
On this occasion, still, his language failed in
nicest choice,
The prayer-book's meekest lines, did not his
angry soul rejoice;
Some say, he swore damnation to the tur-
keys and the deer,
But this, we dare not say, his judgment stern,
so much we fear.

JUVENIS.

ONLY A DREAM.

It was a dream, and yet to me
'Twas real, nor fraught with mystery.
For once again—as oft of yore—
I stood within the farm-house door,
The dear old homestead, brown and grim,
And heard the rooster's mewing din,
And saw the trees full-freighted, bright
With fragrant blossoms, pink and white.
And as I stood in ecstasy,
There came a friend who questioned me;
A friend, alas, who long had lain
Beneath the sod, in sun and rain;
He said, "My friend, has life been fair
And shadowless, as free from care,
As in those days, when you and I
Watched shadows o'er the river dy?
Has fate been gentle, kind, to you?
Have friends been faithful, lovers true?
Have foes been honest in their hate?
Your heart ne'er torn and desolate?
And have you tried to do your best?
With patient trust have you been blest?"
And then there came o'er sunny lawn
A darksome gloom, as when the dawn
Of stormy morning chills the sky,
And all the blossoms seemed to die;
The Susquehanna moaned complaint,
My heart grew cold, my spirit faint,
For I must answer, knew I well,
And all life's solemn story tell;
Confessions made for tasks ill-done,
The clouds grew thicker o'er the sun.
Then answer came, I low and still
"Without volition, strength or will—
"O, friend of mine, you cannot know
How earthly trials vex one so;
When I tell you all the pain,
Of years mispent, you'll rise again
To your bright home, and leave me here
With heavier anguish, greater fear.
At best, I scarcely know the way
To walk aright from day to day;
My spirit—though with broken wing—
And chained to earth, essays to sing;
And sometimes I have clothed the poor,
And have heard the hungry; I am sure
I never saw a heart's distress
Unmoved, or with cold carelessness.
Have passed the weak and weary by;
But tears have wiped from many an eye.
Yet I have caused some tears to flow,
Have brought to some hearts dreful woe;
Have wounded those I loved the most;
And have suffered deeper grief
Than I could bring to your belief."
And thus I murmured on and on,
Till, glancing up, my friend had gone,
And I was standing there alone,
Half-frozen like a granite stone;
Disgusted at my weak attempt
At self-exposure, my discontent,
His strong, pure soul had down away
And left me there, with naught to say.
And then I wept such blinding tears,
As sad hearts weep when crushing years
Of mingled misery and pain
Press on them, like wild storms of rain;
And while I moaned, in deep despair,
I heard my name; and, glancing where
A ray of sunshine flickered through
The rich green leaves, all wet with dew,
I saw this motto, written clear,
And read it, with a thrill of fear:
"A Christian heart, though full of grief,
Knows where to look for sure relief,
Knows how to live, knows how to die,
In hope of immortality."
And then I woke and saw the light
Shine from the East, clear, calm and bright,
And knew that far and far away,
The rippling Susquehanna lay,
And the great farm-house, brown and old,
To strangers long ago was sold;
And knew the friend I thought was dead
Was living, and the words he said
Were only fancies of the brain;
And yet, my heart felt smothered pain,
And tears were resting on my face,
And life seemed such a weary race,
I fain would stop, and rest for aye,
Or till the dawning of that day
When all the burdens shall be cast,
And sorrow evermore be past.
Impatient still, I do not deem
Significant, that fateful dream.

MAY MYRTLE.

Fees and Feathers.

In the RURAL of Sept. 27th, our
friend Bon Ami comes with a great
deal of "fuss and feathers," and assures
us that he will try and bore the Circle,
and he succeeded admirably. In fact, it
is characteristic of Bon Ami to do any-
thing he undertakes with all his might.

However, in my judgment, if the Home
Circle can survive as much assiduity as
was exhibited in Bon's "little piece" in
that issue, it certainly ought to be styled
a "veteran." He says "Schoolma'am
came very near telling the Circle all
about Frank's political honors," and
then adds, "I am going to get ahead of
Schoolma'am in spreading the news." Oh,
laws! talk of you, Bon, getting ahead
of any one. Why, bless me, you could
not get ahead of a colored cook.
Don't mention it again, please don't.
Bon scarcely ever opens his mouth but
what he gets his foot in it.

He reminds me of some little fellows I
have seen, who in their eagerness to tell
anything first, blunder and make pretty
little dunces of themselves. He says:
"The fact is, Frank has been elected a
member of the Kansas Legislature." I
came to the State about three weeks be-
fore the last Legislature of Kansas was
chosen. Now, every member of the
Circle, as Bon Ami knows a person is
not eligible to an office till he becomes
a citizen of the State in which he re-
sides. Bon ought to consult some old
grandmother, and try and learn some-
thing before he attempts to write for the
papers. He further says: "If I had ever
been a member of that body, and the
fact should be generally known, I would
go off in some out-of-the-way place and
hang myself." I presume Bon intends
that to be a very mild and polite way
of saying he would quit and go to Texas.
In a still more recent number of the
RURAL, he comes with a great
"flourish of trumpets" and heads his "lit-
tle piece" "Bon Ami to the Rescue."
[Nay, nay, the editor pleads guilty to
paternity for the head line.] He pro-
poses to help our Rev. friend out of
his dilemma. So much the worse for
Mr. Watson, if Bon comes to the
"rescue." It is pretty good comfort for
a man to receive the assistance of one
who has in advance declared he seldom,
if ever, writes his honest views concern-
ing any subject, (or something to that
effect.) He remarks: "Nothing is a
surer sign of an uncultivated mind than
personal abuse, especially when address-
ing a clergyman." My dear sir, a clergy-
man will be held responsible for the
advocacy of error; just as much so as
the vilest beggar of the street, and must
expect like censure. It was not so much
the clergyman, as the position he has
taken, that we assailed. Bon thinks we
had no business discussing total prohibi-
tion, it being another question, and re-
marks: "The question was, having
filled themselves up all the rest of the
week with whisky, would St. Louis-
ians be greatly injured by drinking wine
and beer on Sunday? What a nice little
aperture to crawl through. If, since
that was the question, why did not that
gentleman stick to it; here is his lan-
guage: 'The moderate use of beer and
other liquors cannot be condemned, and
the law that forbids their sale or use is
merely penal in its effects.'" Now every
one with a grain of common sense knows
that was a thrust at prohibition. Just
that position defeats all prohibition
measures; consequently the gentleman
was indirectly throwing his whole influ-
ence against such measures. His light
and frivolous way of talking about the
subject verifies the fact. Bon Ami says
he has studied the question of
prohibition and has arrived at differ-
ent conclusions from Mr. Watson,
and yet, he has no right to heap upon
him all the abusive epithets he has at his
command. Oh, no! Bon never uses any
epithets. Why, no, of course not; who
ever heard of such a thing? And yet,
Bon Ami knows he has used language
concerning the writers of the Circle
that he would blush to look them in the
face and use. If in company with them
in a drawing-room he would not think
of using such words, as it would be re-
garded as an insult. And yet he now parades
himself before the members of the Circle
as the very embodiment of culture and
good breeding, and attempts to teach the
Circle good manners. As well might a
turkey-buzzard attempt to teach the
nightingale to sing. But then he says
the language of Fred and myself was
ungrammatical. I have seen little fel-
lows at play before now when anything
did not go to suit them, "make faces" at
their playmates and go off in a "huff."
Bon reminds me of these little fellows.
When he has nothing more to say, he
turns upon his opponent and "makes
faces" at him, and cries out, "there now,
you don't know as much about grammar
as I do." Bon knows nothing concerning
the acquirements of the members of the
Circle in that direction, except what he
sees in their writings, and if we are to
thus judge, we must declare Bon's lan-
guage, in that direction, to be very often
extremely faulty. He evidently has about
as great a conception of the meaning of
tense in grammar as a baboon has of the-
ology; and yet he essays to come into the
Circle and teach us, not alone manners,
but grammar. Will some one please hold
my hat while I snifle?

Our friend Watson comes again and
denounces us as a liar (or its equivalent),
which caused us to laugh, and yet after
all, it is sad indeed, especially as Bon Ami
has taken the pains to come to the
"rescue" and announced "the opponents
of Mr. Watson assumed a mode of war-
fare which they know he cannot adopt
without the loss of that dignity essential
to a clergyman." The question so
presents itself, is it not now best to "call
a halt" and sigh for the day to speedily
come when the sacred prefix "Rev" shall
not be so freely used? I have something
to say to one or two other members, but
must defer it till another letter.

FRANK.

Rest, Kansas.

From an Old Maid.

Dear old Home Circle: I'm awfully
glad somebody thought of me when I
was sick so dreadfully, and most died,
just on account of that horrid acoustic
Mr. Watson wrote on my name. I tried
my very best to change my name before
I wrote again, but—well, girls can't ask
gentlemen to marry them, of course, not
even if their name happens to be Jerusha
Wiggles—which, thank goodness, mine
isn't. Nina, the dear, good, sympathetic
soul, wanted me to come, and that bless-
ed girl, the sweetest woman in the
world, asked after me, so here I am. Mr.
Watson, like Satan in Paradise, and what
are you going to do about it? I'd like
to think Bon Ami afraid of me, poor little
me, who don't know scarcely anything,
and never killed even a chicken in my
life. But I'm death on snakes and spi-
ders, and don't you forget it. To tell the
square truth, measured off in sections
like Dr. W.'s poetry, I really and truly
have been trying to get married. There,
now, you can scream and run away if

you want to, a little plain truth is often
refreshing, just from its novelty. You
know very well that it's "woman's mis-
sion," and you know, too, just as well
as I do, that an old maid is perfectly horrid,
and that everybody pokes fun at her—
when just as likely as not it never was
her fault at all; but then, all the same, I
just abominate 'em, and never will be
one if I can help it. Now I suppose you
are all off in the corners snickering at
me and saying, "Oh, that dreadful, aw-
ful girl!" But I tell you the matter is
getting serious. I'm most twenty now,
and Fred he—I don't like to tell it—but
he don't like me any more because I flirted
just a tiny bit with a Chicago drummer.
I wouldn't have cared, either—very much
—if that hateful old drummer hadn't had
a wife in Chicago. I didn't know that,
of course, or I wouldn't have looked at
him, Fred did, and oh, my! he just looks
me an awful girl. I'm not, though, I'm
a very nice, good tempered, respect-
able girl for one who has been raised by
a stepmother. I hope really—now I
think of it—that I haven't shocked any-
body. I'm not a shocking style of girl
at all, I merely tell things that all the
other girls think and do, but then, they
don't tell; they're too awfully nice for
that. But, Mr. Editor, I must get my
Papa some dinner—I save the expense of
a servant, so you see I am good for some-
thing, even if Fred didn't want to marry
me. And by the way, Mr. Editor, please
tell Dr. Watson not to write any more of
that awful poetry about me. If he wants
to have me arrested and put in jail, or
whipped, or anything reasonable, I can
stand it; but that poetry! Oh, excuse me,
please! Good-bye, everybody.

Thine ever, FANNY FROST.

We wish it understood that the head-
line to this letter was not put there by
Fanny Frost. The editor is responsible
for that, but the truth must be told in
the RURAL WORLD, though the heavens
fall. When a young lady under twenty
has an escapade with a Chicago drum-
mer that ends it. Poor Fred!!!

Woman's Christian Temperance Union of Missouri.

PRESIDENT, CLARA HOFFMAN.
KANSAS CITY, MO.,
EVANGELISTIC DEPARTMENT.

COL. COLMAN: To the officers and
members of the local W. C. T. U.
of Missouri—Beloved Sisters: Before
commencing our winter's campaign
for the cause of temperance, let
us discover, if possible, the weakness
of our forces. What is the reason we
have been thus far defeated by the liquor
dealers? Why is it that the Lord hath
sold us into the hands of our enemies?
(Judges 6: 11). If we are the King's sol-
diers, we are resolutely and persistently
marching under the King's orders. If we
are the host of God, we are wearing the
uniform of His saints. Again, if we are
the followers of Jesus we are armed
with such spiritual weapons, as a spiri-
tual warfare demands. Let us examine
ourselves and discern whether we are
fulfilling the conditions of victory. Have
you fully surrendered your will to that
of the commander? Will you forsake
your own plans of attack and cheerfully
obey His orders, however ridiculous they
may seem in sight of men? Are you
willing as was St. Paul to become a fool
in the estimation of your neighbors, for
the sake of advancing the kingdom of
your Heavenly Leader? As a loyal sol-
dier will you leave father and mother,
husband or wife, children, reputation,
homes and lands, to battle in the army?
When the Holy Ghost fell upon the peo-
ple (Acts 4: 32) no man said that ought
he had was his own.

Joshua was expected to meditate in the
day and night, and it was "to depart out
of his mouth." So he was a warrior
about with truth and prepared to resist
the Canaanite. Dear sisters, are you
strengthening yourselves by seeking
counsel of the Word of God, and is it
constantly on your lips? Again, are
your feet shod with the preparation of
the Gospel of peace, in meekness in-
structing those that oppose total absti-
nence and prohibition? Do you possess
the "mind which was in Christ?"—Phil.
2: 5-11. Again, beloved sisters, may I ask
if you have the Shield of Faith? Do the
bright deliverances which God has given
His people in past ages inspire you with
expectation of the conversion of multi-
tudes of sinners in the near future? As
a prelude to these coming revivals, are
you praying for the Christian Church
that its backslidings may be healed and
that it may renew its consecration to
God? Have you enough faith in God's
promises to engage in all prayer for all
sinners. (Eph. 6: 18).

As useful books to assist you in wait-
ing on God and renewing your strength,
I can most heartily recommend the
writings of Hannah Whitall Smith and
Frances Ridley Havergal. They are
advertised in most of our religious news-
papers.

Will you not, my dear sisters, in view
of your Redeemer's claim upon you, will
you not now set apart a day for prayer
and Bible study, that you may learn to
so abide in Christ, and His Word may
so abide in you, that ye shall ask what
ye will and it shall be done unto you.
(John 15: 7). Yours, in the love and
service of Jesus, and in the hope of His
coming.

MARY M. CLARKE.

Supt. Evan. Dept. Mo., W. C. T. U.

From Jennie Klaudhopper.

Seeing we have still another school-
marm, we thought we would throw in
our little mite, and also ask our school-
marm, Tom, to shake hands with us.
Hillsboro and Vandalia are not so far
apart but what one might call and pay
each other a friendly visit. It has never
been my happy lot to teach a graded
school, but I know I have had schools of
as much inconvenience as any teacher
could have in the way of old books, and
not more than two alike. As to my
rules, I have but one, and that is, do
right, and all from the least to the
greatest, are able to understand that. I
think we should all try, as a great part
of a child's future life depends upon its
training in school, to teach them to be
polite, to "Remember the Sabbath to
keep it holy," to use no profane lan-
guage, and to teach the boys always to
take of their hats when they come in a
house.

My method of opening school on the
first day is old foggy, but I will give it

as freely as if it was of the latest style.
First, I open with reading of the Scrip-
tures, singing and prayer, then I get all
the pupils' names, after which I gen-
erally takes the remainder of the day to
get all my classes arranged for business.
I hope to hear from the other S. M.
JENNIE KLAUDHOPPER.

COL. COLMAN: I am only a little
boy, and I have never written for a pa-
per before, but I can plow and harrow,
too, and did try to drill some wheat last
fall, though I could not do it very fast.
I have been snarling rabbits, but I have a
gun and a dog and can shoot them now.
I have saved a dollar which I enclose
to you for the RURAL WORLD as a birth-
day present to my father, who thinks so
much of the RURAL WORLD.

We live on a prairie farm in Kansas,
and have lots of stock, but I go to
school, am a member of a literary club,
and not only doing all I can on the farm,
but as well getting an education.

JEROME B. GOODRICH.

Come again, Jerome, the RURAL
WORLD is not a bad literary school of it-
self.

CHAFF.

A man's conversation is a sure index to his
mental capacity.—Herbert Spencer.

Slumber not in the tent in your columns.
The world is advancing; advance with it.

Tested by time. For Throat Diseases, Colds,
and Coughs, Brown's Bronchial Troches have
proved their efficacy by a test of many years.
Price 25 cents.

Men are born with two eyes but with one

tongue, in order that they should see twice

what they say.—Colton.

You can't judge of the value of a man by

his talk any more than you can judge of the

value of the tree by its bark.

"I am truly thankful that I ever used Dr.
Benson's Colony and Chamomile Pills, for
they cured my periodical headache. Mrs. J.
R. Paddison Point Caswell, N. C. 50 cts. at
drugists.

One should be careful not to carry any of
his follies of youth into old age, for old age
has follies enough of its own.

It is against human nature to believe any
people will persist in wrong and cruelty if
they are permitted to enjoy their natural
rights.

A Specific for Change of Life. We are in-
creased of a letter from J. T. Hamby, Esq., of
Florida, Ark., in which the writer says: Sa-
maritan Nervine cures female decline, and
during the change of life it is a specific. Sug-
gestive facts, truly. \$1.50

To think we are able, is almost to be so; to
determine upon attainments, is frequently
attainment itself. This earnest resolution
often seems to have about it almost a savor
of omnipotence.—Samuel Smiles.

You have no right to spread abroad your
opinions until you have done your utmost to
be sure that they are true, because these
opinions determine the conduct, character,
welfare, and happiness of men.—Minot J.
Savage.

A bridge over the Mississippi at New Orleans

is a late project. The river is 2400 feet in

width there, and very deep, but the plan is

for a bridge of seven spans, one a draw, each

300 feet in length, the piers to be piles in clus-
ters. The estimated cost is \$15,000,000.

CORNERS

WHY ANY ONE WILL SUFFER FROM CORNS
when they can get a bottle of the "GERMAN
CORN REMOVER"—a sure and painless remedy
for both Corns and Bunions—of any Drugist
25 cents. There are worthless imitations—similar
in name and otherwise. Get the "GERMAN CORN
REMOVER." C. N. CHRISTENTON, Sole Proprietor,
118 Fulton Street, New York.

GLENN'S SULPHUR SOAP IMPROVES THE SKIN

WARRANTED 6 Years.

\$115 FOR 25 STOPS. \$49.75

25 STOPS.

Q FULL SETS OF

Golden Tongue

REEDS.

25 STOPS.

Q FULL SETS OF

Golden Tongue

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The Dairy.

Dairy Notes.

Henry Bush, of the North Byron (Wis.) factory, sold nearly 12,000 pounds of cheese at 11 cents a pound. The lot was made during September. The amount of milk used was at the rate of 87-8 pounds to one pound of cured cheese.

Sulphuric acid, it is claimed, is a simple but certain test for adulterated butter. Fresh, pure, yellow butter, by the slightest contact with sulphuric acid, turns almost a pure white, while oleomargarine made almost from tallow changes to a deep crimson red. When lard or other oils are used, the colors are diversified—showing all the colors of the rainbow.

A pleasing exhibition of fine dairy products was made at the New York State Fair by Major Alvord of Houghton Farm, Mountville, N. Y. It consisted of bottled milk, butter, and specimens of fine fancy cheese—Brie, Neuchâtel, D'Isigny, American cream, and other sorts. It was a suggestive example of what can be done by American dairymen in this direction.

Mr. T. C. Campbell, of Manchester, St. Louis county, is about to bring to his herd a large addition of Holstein cattle from the late importation by J. E. Miller, of Belleville, Ill. He will add about ten of these splendid animals to his herd as soon as he can provide the necessary buildings for them, and St. Louis will have occasion no longer to send buyers elsewhere when wanting first-class Holstein stock. Mr. Campbell reports Mr. Miller's selection as first-class, all of them being helpers or helper calves and the pick of the importation.

The Dairy says that sulphuric acid is a most effective antiseptic and anti-ferment, and may be produced by burning sulphur upon live coals upon a shovel, or a bed of coals carried into a stable with perfect safety. It will also be found an excellent method for freeing dairy rooms and cellars from the spores of mildew, which have a very injurious effect upon the milk and upon the butter or cheese made from milk that has been exposed to them. In fact, from constant prevalence of these spores, it might be useful to make a practice of fumigating dairies occasionally, especially after a bad, damp spell of weather during the summer.

EDITOR RURAL WORLD: In our last letter we spoke of the advantages of a creamery at Godfrey. Since then Mr. Jarvis Whitmore, son of an Eastern capitalist, and nephew of J. Y. Sawyer, one of Godfrey's oldest and most successful farmers, has arrived and is making extensive preparations for building a creamery this winter, which will make 300 to 400 pounds of butter daily; this creamer will be supplied with the best machinery procurable, and will probably be in running order by the 1st of June next. Mr. W. has already constructed a large "silo," with a capacity of 250 tons of ensilage, which is sufficient to keep forty cows six months. Mr. John Sawyer, Jr., opened his silo, (the first one built in Southern Illinois) a short time since, and found the ensilage in a perfect state of preservation. The cows eat this food with avidity. The flow of milk was increased twenty-five per cent. during the first week that they were fed with ensilage. The opening of the "silo" drew a large number of interested farmers, who after a careful examination declared their intention to build "silos."

Mr. Samuel Waggoner, living a short distance from Godfrey, has taken this year 1000 lbs of honey from thirty-five colonies of bees; this he sold readily at 15 cents per pound. Mr. W. uses the "Centennial bee hive," manufactured by Elvin Armstrong. These he considers the best bee hive for the money in use.

JUNIOR.
Godfrey, Illinois, Dec. 5th, 1883.

EDITOR COLMAN'S RURAL WORLD: I saw a copy of your paper a few days ago and was so well pleased with it that I thought I would subscribe for it for one year. I want to get all the information I can in regard to Jersey Cattle. I saw in your sale notice of Jerseys some thoroughbreds not subject to registry. I do not understand it. I thought all thoroughbreds were subject to registry. Please explain. Enclosed please find one dollar for a year's subscription; send to my address. WILLIAM I. S., Palmyra, Mo.

All thoroughbred Jerseys are eligible to registry providing their pedigree can be traced. As an illustration of how it can be done we may suppose John Smith to have bought ten animals guaranteed eligible to registry and for which he paid \$300 per head. But John Brown from whom he purchased died before he could perfect the pedigrees and left no one who could. In such a case no one could prove up the pedigrees, and hence the animals were not eligible to registry. In this and other ways many animals, eligible in every other respect, are ruled out; and though to all intents and purposes as valuable as others, do not sell at as high prices.

At the recent public sale of Holsteins, held at Chicago, Ill., the heifer calf, "Mercedes 3d," daughter of the famous butter-producing Holstein cow, "Mercedes," was secured by Messrs. Smith & Powell, of Syracuse, N. Y., at a cost of \$4200, the highest price ever paid for a Holstein.

The recent record of "Mercedes," in competition for the Breeders' Gazette's Challenge Cup, in which she vanquished her Jersey competitors and raised the record higher than ever before reached, is still fresh in the minds of our readers. Her yield for 30 consecutive days was 99 lbs. 6 1/2 ozs. of unsalted butter.

"Mercedes 3d" is a grand-daughter, through her sire, of the well known cow, "Aegle," so long one of the prominent members of the Lakeside herd and whose milk record is only fourth in the list of milk records. The greatest yield, 12,120 lbs. 8 ozs. in a year, having been made by her sister. The next two largest were made by "Aegle" and "Aegle 2nd," (the latter but two years old) giving respectively 18,004 lbs. 15 ozs. and 17,746 lbs. 2 ozs. in one year. Next "Aegle," with 18,233 lbs. 10 ozs. in one year, "Aegle Rosa," a niece of "Aegle," has given 10,633 lbs. 2 ozs. in 7 months to Nov. 1. All these animals, with one exception, are in the herd of Smiths & Powell.

"Mercedes 3d" arrived at Lakeside Thursday, the 22nd, and is now permanently located, with many other high-bred Holsteins, and will be at all times ready for inspection by all visitors who will be welcome.

Dairying in Pennsylvania is in a prosperous condition, and does not seem to suffer from competition with "cheap" Western products. The *Hermantown Telegraph* says of Chester county: "The dairies of the county are producing a large quantity of milk, and some of the creameries are receiving more than they can conveniently handle. The Oakland creamery, one of the largest, is receiving between 8,000 and 10,000 pounds of milk daily, out of which are made about 325 pounds of butter and seventeen cheeses per day. The Fairmount creamery is receiving 16,000 pounds of milk daily, and last month paid 3 3/4 cents per quart. In consequence of the large quantity of butter made, the selling price has fallen considerably. Our farmers are retailing choice grass prints in the Philadelphia markets at 30 cents per pound." This shows too the value of a good market as well as of fine goods. Elgin creamery of choice qualities has been selling at 20 to 21 cents.

Our market reports do not evidence this disparity in values, and we are disposed to doubt its accuracy.—[ED. RURAL WORLD.]

The spread of the creamery system is only just beginning. When every town has its creamery, these will number thousands in every State, and if the same idea prevails everywhere that prevails in Kansas, it will not be long before every farmer will have a creamery in sight of his homestead. We read in a Kansas paper that at Lyons, in Rice county, Kansas, there has just been organized a joint stock company, with a capital of \$7,750, to build and operate a creamery, and butter making is to begin in a very short time. The capacity of the works will be 1,200 pounds of butter per day. A paper at Sterling, which is in the same county, says that unless Sterling gets a creamery at work, the Lyons folks will take the cream from all around them, and farmers who sell the cream to an establishment will go to that point to get their pay when due, and naturally will spend their money in the place where the creamery is located. Sterling, to protect her trade, must have a creamery.

And the creamery system is bound to spread when it is discovered how the business of a town or village is increased by one of these institutions; and this effect actually results, because the farmer's income is almost doubled by a creamery, and he has more money to spend, and that naturally makes him find out new wants.

Farmers' Meeting by the State Board of Agriculture.

The State Board of Agriculture will hold a Farmers' Institute meeting at Higginsville, by invitation of Lafayette County Grange, on Tuesday and Wednesday, December 18th and 19th.

The first session will be held on Tuesday, at 10 a. m., and continue afternoon and evening to afternoon of 19th. Practical farm talks will be given. Professor S. A. Knapp, of the Iowa Agricultural College, and Geo. Lawrence Esq., of Wisconsin, will discuss the creamery system of butter-making. The president of the Board, Hon. John Walker, will review the "Progress of Agriculture." Prof. S. M. Tracy, of the Missouri State Agricultural College, will give a horticultural talk.

Hon. E. C. More, M. F. Doud and the Secretary will be present and give addresses. Among other topics that will be presented are system of farming for success; stock feeding, breeding and improvement of farm crops, farm life, and other subjects that may arise by special request.

Dr. S. S. Laws, L.L.D., President of the State University of Missouri, by special request of the County Grange, will be present and take part in the proceedings.

FARM PRODUCTS—Farmers attending the meeting are requested to bring for show or exchange any product that will have general interest.

YOUR WIVES AND DAUGHTERS—Do not leave them at home but bring them too the afternoon and evening sessions. Hon. E. C. More will give an address of interest to them. Of special interest to the ladies also will be the creamery and horticultural questions.

OPEN SESSION.—While the board goes to Higginsville on the invitation of the County Grange, it is understood that it is open to all. All are cordially invited. The Board of Agriculture is a State organization, appointed by the Governor, and is composed mainly of practical farmers. They come to you with no personal purpose to serve, but to discuss the live, practical farm problems of the day. We ask a full attendance. Copies of the annual report will be on free distribution. Per order.

J. W. SANBORN, Secy.
Columbia, Mo., Nov. 30, 1883.

Milk Fever.

COL. COLMAN: The last number of the RURAL contains an inquiry concerning milk fever. I answer: Very high and acknowledged veterinary authority say there is no remedy. The very best cow I have ever seen died of parturition fever. It was in midsummer and by the looks of her udder when I first saw her I supposed she was in full flush of milk, whereas she had not yet become fresh. She calved in a day or two afterwards, cleaned all right, took the fever and died the next day. I felt very much distressed about the event and determined to know what remedy veterinary science had. Made inquiry the first opportunity with the above result. There were three cows of the ancestry of the case given, all died of milk fever. The act of parturition always produces more or less fever. Where the udder is very much distended and the cow in high condition, having been stimulated to produce much milk, the fever often proves fatal—I might say generally. Such a cow with a large milk development should be kept on scant rations rather than the opposite. Her bowels should be kept loose—if she drops her calf during grass she ought not to be allowed to feed as much as she pleases, but only a little night and morning. Linseed cake meal may be given in small quantities, because we must look to prevention rather than cure.

If this should meet the eye of a veterinarian who knows of a remedy let him give his name and address, if he do not please to give a prescription, which latter we have no right to ask without a fee.

Kirkwood, Mo.

In addition to the above we may add that milk, or parturition fever, may be prevented by a proper course of feeding and handling before calving. And just here and now we may say that the rule holds good with all the animal creation. Long and difficult parturition is as preventable as any other abnormal performance of the ordinary functions of nature, but it does not consist in excessive feeding and forcing for milk production to the time of calving by any means; and those who are crowding their animals for any particular purpose may bear this in mind. To stop milking two months, or even more before parturition is natural; to do it at least that length of time is both natural and philosophical. Apart from this, however, we can recommend a laxative diet for at least two months before calving and as perfect rest and quiet as can be had.

Poor Economy.

Judging from the way the vast majority of the dairy farmers produce milk, we should have to conclude that the most of them think we are "gassing" when we aver that cows can be kept right up to a full flow of milk (less, of course, the natural decrease caused by gestation), by a persistent, liberal feeding. And those who are crowding their animals for any particular purpose may bear this in mind. To stop milking two months, or even more before parturition is natural; to do it at least that length of time is both natural and philosophical. Apart from this, however, we can recommend a laxative diet for at least two months before calving and as perfect rest and quiet as can be had.

We have patrons with just as good cows, just as good farms, naturally, but have not been used for dairying so long, and not average, the same days, twelve pounds per cow. The men who own them knew too much to attempt to run a 10-horse power threshing machine with five horses; but don't seem to realize that they lose money in running a milk-making machine at only half its speed and power. Milk is food transmitted by the cow. She has no other mission than this on earth, except to produce offspring to continue the existence of her species. The more you can get one machine to do and preserve it in a healthy condition, the more net profit a farmer might as well have two plows for one team as to have two cows to eat what one ought to consume. Downright disbelief of patent facts is what all the immense majority of the keepers of cows—they think the liberal feeding judiciously given is lost, or, if not quite that, that it is worth more to sell; when the solemn, gospel truth is, that the cow is the best purchaser of all the coarse grains the farm can be made to produce. The most successful dairy farmers are those who never sell the coarse grain raised, but are often buying till they get their farms in a high state of fertility. The skeptical farmers say they do it because they are rich; but the bottom truth is they are rich because they do it.—Cedarburg News.

W. W. Beazley, of Columbia, Mo., was in the city last week with a load of 50 hogs that averaged a little over 200 lbs. for which he got 43-4 cents. They were poor in flesh and he wanted to part with them because of the scarcity of corn. Many will, we fear, have to do likewise.

Fatal Disease Among Hogs.

DECATUR, ILL.—Seventy-three of eighty hogs belonging to Robert Moore, living near Natick, have died within the past ten days. He still has 120 hogs left in his bunch. They are dying off at the rate of three to five a night. The disease seems to be beyond the reach of remedies. Several hog doctors from a distance are at the farm investigating the character of the disease.

Fattening Hogs.

COL. COLMAN: I am a constant reader of your excellent paper and gather many valuable and important facts from it on sorghum culture, hog raising, feeding and fattening. I now wish you, or some of your many readers, to tell which is the best food for fattening hogs, boiled shelled corn, or corn meal cooked. If one is better than the other, how much better. Let us have an article on this all important subject through the columns of the good old RURAL WORLD, and oblige.

A SUBSCRIBER.

Lafayette, Kansas.

Here is food both for thought and comparison. We shall be very glad when the readers of this department give their own experience, a thing, by the way, that seldom do. Stewart, in his last work, "Feeding Animals," has this to say, and as it brings philosophy down to the test of practical experience we think our friends will do well to think of it.

"Every housewife is familiar with the fact, that starch will not dissolve in cold water. It follows, then, that those grains containing the largest proportion of starch will be most benefited by cooking, and these (corn, rye, oats, barley), are most used as fattening food for pigs. Corn, especially, is considered the standard fattening food, and it contains about 64 per cent. of starch; rye 54 per cent.; barley 47 per cent., and oats 40 per cent. of starch. When corn meal is well cooked, it is something more than doubled in bulk—the bursting of the grains of starch causes it to swell and occupy double its former space—and some feeders have considered it as valuable, bulk for bulk, as before cooking; or, in other words, that its value is doubled by cooking. Hon. Geo. Geddes, of New York, a farmer of long experience, says:

"I find if I take ten bushels of meal and wet it in cold water, and feed twenty-five hogs with it, they eat it well; but if I take the same quantity and cook it, it doubles the bulk, and will take the same number of hogs twice as long to eat it up; and I think they fatten twice as fast in the same length of time. By cooking you double the bulk and value of the meal."

We have one complete, comparative experiment of our own to offer as illustrating this point:

"On the first of Oct. we divided six pigs of the same litter, into two lots of three each; they being of the same weight and thrift—25 lbs. each lot—placing them in separate pens. Lot No. 1 was fed upon corn-meal, soaked about 12 hours in cold water, all they would eat—with a little early-cut clover-hay thrown into the pen for them to chew to promote health. Lot No. 2 was fed corn meal, thoroughly cooked, and fed luke warm, *ad libitum*, with a lock of clover-hay.

This experiment continued until the 8th of January, or 100 days. Lot No. 1 consumed 2,111 lbs. of meal and gained 420 lbs.—average 140 lbs. each. Lot No. 2 consumed 2,840 lbs. and gained 600 lbs.—average 200 lbs. each. This gives 11 pounds gain for each bushel of meal by lot No. 1; and 16.47 lbs. gain for a bushel of meal, by lot No. 2. Lot 1, at an average, 7.04 lbs. per day and gained 1.40 lbs. Lot 2 ate on an average, 6.80 lbs. of meal per day, and gained 2 lbs.

Another feeder may be quoted as follows:

"Generally, there is more advantage in cooking food for hogs that are being fattened than for other animals. Hogs require a larger variety of feed than most animals do. Many kinds of feed that are of great value to hogs should be cooked before they are fed. Among them are potatoes, turnips, apples, pumpkins and squashes. These articles are highly valuable as condiments and appetizers. They may not produce much fat, but they will make the pigs eat more, and to digest what they eat better. Hogs that get a very great variety of food when they run at large generally tire of one kind when they are kept in confinement. Hogs that are fed on corn alone will keep up their appetite for it better if they have an occasional feed of that which is cooked. A Kentucky feeder who has been very successful in fattening hogs for the market stated that the key of his success was chiefly owing to the course he pursued in the preparation of the food for them. He usually purchased large numbers of hogs that had been accustomed to run at large till they were of large size. He commenced to fatten them by turning them into fields of lodged grain. As corn became ripe he fed it to them at first on the ear. His observation was that their teeth soon got them pain, and that they as a consequence ate less corn than was desirable. He accordingly changed their food, first to corn-meal, and then to corn-meal that had been cooked. By adopting that course they continued to eat heartily and digest their food."

Cough in Pigs.

This is most frequently due to cold and wet; but is also one of the symptoms present when the animals are wormy; and coughing accompanies all disorders or diseases of the organs of breathing, whether these are of a malignant or complicated nature or not. Hence, to advise any special course of treatment, from the only information that the animals are coughing, is impossible. When due to exposure, and if it is a simple catarrhal affection, provide a comfortable and well ventilated housing; also change the diet. Give to each pig, morning and evening, half a drachm each of sulphur of antimony and camphor, and one drachm of powdered liquorice root, mixed with a little molasses and placed upon the root of the tongue. If the cough is due to worms, flower of sulphur may be mixed among gruel or other sloppy food. For pigs under three months old, a teaspoonful is a dose, and for older ones from a dessert-spoon to a tablespoonful. It may be given four days in succession, morning and evening, and repeated every other week, so long as needed only. Give sour milk, buttermilk, with sliced, raw onions, celery tops, acorns. Avoid stagnant and putrid water. Swine should always have access to charcoal, cinders, salt, which should be supplied separately in some convenient sheltered corner.—Prairie Farmer.

The Apiary

See Talk.

This has been an exceptional year for honey-bees, wasps, and yellow-jackets. Last spring Pa had two stands of bees. The first hive of bees did very well; swarmed late in May one large swarm, that I put in a small hive. They went to work right away on the white clover, of which there were 10 acres. I was very much amused, while sitting immediately in front of the hives, watching the return to them with a ball of nectar on each limb, as large as a small pea. The first swarm deposited 20 pounds of honey in a box, which I carried away about the middle of June, and in 10 days after, a nice swarm came out of this hive, which I hived. They have nearly filled the lower part of their hive. Another swarm also came out of the first old stand early in June, from which I have taken 30 pounds of honey, and 30 pounds from the first old stand itself.

The other hive of bees did not do quite so well, being a different kind of bees. The bees swarmed twice, but one swarm went away. The swarm I hived, which Pa gave me, has filled the lower part of the hive nicely, but has made no surplus honey. I took 30 pounds from the second old stand. I have taken 110 pounds altogether from four hives; took the last away August 1. Pa said I ought to have left it, and ought never to take any away after July 20, as they need all they make to winter themselves on.

I never saw bees work harder than they did in the white clover season in June. As I said before, Pa has two kinds of bees; the first are small black bees. They are very quiet and nice to work with, and beat the Italians all to pieces making honey. The others, which are Italians—I call them "old Red Backs"—are not as good honey-makers as the former but are excellent fighters, and are very mean to work with.

Bees need careful attention. The little black ants nearly "stuck" two hives; I tried salt with good effect, but nothing was as good as the contents of Mrs. R.'s tea-kettle. Next some strange bees got to robbing one hive. Ma used to tell me that the large bees, the drones, did not do anything; but I noticed them going to a hive and coming out with their mouths full of something, and the other bees would fight them when they could get a chance. It was real fun to see the little working bee kill and drag out the drone, notwithstanding the drone is nearly twice the size of the working-bee; I have seen a bee drag out a drone that

was alive. I shall put my bees in the cellar this fall, and next summer I will not allow them to swarm naturally, but transfer them, so that I shall lose no swarms.

Now, some one will say: "Oh! I am so afraid of bees!" Well, just so sure as a person is afraid of bees, they will sting him. Don't run and strike at them; just stand still and let them fly around, and if you are sure one is going to sting you, kill it without striking at the others. Pa's Red-backs will sting the hired man when he is two rods from the hive, whereas I can sit in front of the hive that has the little black bees in it for thirty minutes, without being stung. Pa does not sell much honey, for we all like to eat it, and we use some medicinally. If any of the cousins have good old Dutch mothers, they will make use of it in some way. An excellent cough sirup is made of honey, and the best poultices for carbuncles and boils are made of flour, mixed with honey, to make it stick to the rags. JNO. P. CONFER, Greene Co., O.

Bees-Keeping for Boys.

Boys on the farm can lay by a nice little sum of money every year by keeping a few swarms of bees. Quinby, one of the best authorities on bees we have ever had in this country, says that a stock of bees is better than a hundred dollars out at interest. If they are properly taken care of there is no doubt of it; ten dollars a stock is a very reasonable estimate of profit on every stock in a well conducted apiary. Every farmer's boy should have a stock of bees to work with and use the proceeds as he sees proper; let him get to begin with a small stock in a movable comb-hive, he will soon become interested and when this is accomplished, half the battle is won, for he will seek for and find all information necessary for successfully managing them.

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